



		/lab_host="E. coli strain XLOR"
		/note="Vector: pBluescript SK(-); Site_1: EcoRI; Site_2: XbaI; cDNA was prepared from polyA+ enriched RNA from effective root nodules harvested one month post inoculation with Sinorhizobium meliloti. The cDNA was directionally ligated into the Uni-ZAP XR vector from Stratagene and packaged using Gigapack III Gold Packaging Extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-ZAP phage using Ex-Assist helper phage and propagated in XLOR cells."
ORIGIN	221 a	173 c 175 g 229 t
BASE COUNT		
Query Match	63.1%	Score 429.4; DB 10; Length 798;
Best Local Similarity	78.5%	Pred. NO. 7.7e-120; Mismatches 141; Indels 0; Gaps 0;
Matches	514; Conservative 0; Mismatches 141; Indels 0; Gaps 0;	
QY	7	GTTGGACTGGCAAATGCCCATGGCCACATTATGGGAGATGCAAGCCTGGCACATNG 66
Db	144	GTTGGATGGAAATGCCCATGGCCACATTATGGGAGATGCAAGCCTGGCACATNG 203
QY	67	GTTGGACTGGCAAATGCCCATGGCCACATTATGGGAGATGCAAGCCTGGCACATNG 126
Db	204	GGAAGGGCTGTGGTATGGAAATTGGTATAGCCAAAGGCTAGCAGCACACATGTC 263
QY	127	CTGAGCAGCTGGCAATTACAATGGATAAGTGTTGGCTGCTGGTAAGACTGT 186
Db	264	CTAAGCACTGCCTTTCACAAATGGATGAGTTGGCTGCTGGTAAGACTGT 323
QY	187	ACAAACGACCTAAATGGGCCCTCGGGAACATATTAGGTCACTGGCACACACTTGC 246
Db	324	AACAGTGACCTAAATGGCTTCTGGTAGCATATGGTCACTTGCTAACACTTGC 383
QY	247	CCTCTAAGCTTGCTCCCTAACACAATGGTAGGTGCAACCCCTCTCCAAAC 306
Db	384	CCCCAACACTTGAGAGCTTACCAATGGTAGGTGCAACCCCTCCCTCAGCAC 443
QY	307	TTCGACATGGCTGAGCCTGCTCTCTCAAACTCAATACCGAGCTGTGATCTGC 366
Db	444	TTTGAATCTGCTGAGCTGCTTCTTACAAATGCTCAATACAAGCTGGATGTCTC 503
QY	367	GTCGCCCTTGTTGGTACATGATGAAGAAGGTGGGAGCTTACATCAATGCG 426
Db	504	ATTTCCTCTGAAAGTCCCTGTATGAAGAAGGAGGATTCAGATTCAAATAATGA 563
QY	427	CACTCATACTCTCAACTCTGTTGATCAGAACCTGGGGCGAGGCACTCT 486
Db	564	CACTCATACTCTCACTTGTTGTCACAAATGTTGGAGCTGGAGATGATCATCT 623
QY	487	GTGTCGATTAAGGGCTGCAACTCTGAGATGCAACCTGCTAGAAATTGGGCCAAC 546
Db	624	GTGTCATCAAGGGATCAAGACTGGATGGCAAGGCTATGCTAGAACCTGGGAGAC 683
QY	547	TGGCAAAAGAACAACTATCTCAATGGCCAGGGCTTCTTCAGTCACTCTAGT 606
Db	684	TGGCAAAAGAACAACTATCTCAATGGCTCAAGGCCCTCTCATTCAGTCACATAGT 743
QY	607	GTTGCACTCTCAGCTTAAATCTCGTCCTCAATGGCAATTGGCAATTGGCAA 661
Db	744	GGTGAACATCACTAGCACAACTGGTGTGCAATTGGCAATTGGCAATTGGACAGA 798
RESULT 2		
B1932999		
LOCUS	B1932999	767 bp mRNA linear EST 18-Oct-2001
DEFINITION	EST552888 tomato flower, 8 mm to preanthesis buds Lycopersicon esculentum cDNA clone cTOC4J22 5' end, mRNA sequence.	
ACCESSION	B1932999	
VERSION	B1932999.1	GI:16247471
KEYWORDS	EST.	
SOURCE	tomato	
ORGANISM	Lycopersicon esculentum	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Solanum; Lycopersicon
REFERENCE	1 (bases 1 to 767)	
AUTHORS	van der Hoeven, R.S., Bezzerezides, J.L., Karamycheva, S.A., Tsai, J., Uitterback, T., Van Aken, S., Ronning, C.M., Niemann, W., Fraser, C.M., Martin, G.B., Giandomenico, J.J. and Tanksley, S.D.	
TITLE	Generation of ESTs from tomato flower tissue, buds 8 mm - preanthesis	
JOURNAL	Unpublished (2001)	
COMMENT	Contact: CUGI	
Clémson University Genomics Institute		
100 Jordan Hall, Clémson, SC 29634, USA		
This clone is available through the Clémson University Genomics Institute		
Seq primer: T3:		
Location/Qualifiers		
1. . 767		
/organism="Lycopersicon esculentum"		
/cultivar="TA496"		
/db_xref="taxon:4081"		
/clone="cTOC4J22"		
/clone_1ib="tomato flower, 8 mm to preanthesis buds"		
/tissue_type="flower"		
/dev_stage="buds 8mm to preanthesis"		
/note="Vector: pBluescript SK(-); Site_1: EcoRI; Site_2: XbaI; supplier: Cornell University; sequencing: The Institute for Genetic Research; Flower buds and flowers were taken from greenhouse plants (4-8 wks old, TA96). They were immediately frozen in liquid nitrogen and then size-separated before remaining frozen."		
BASE COUNT	215 a	144 c 168 g 240 t
ORIGIN		
Query Match	59.4%	Score 404.8; DB 10; Length 767;
Best Local Similarity	74.7%	Pred. NO. 2.4e-112; Mismatches 172; Indels 0; Gaps 0;
Matches	508; Conservative 0; Mismatches 172; Indels 0; Gaps 0;	
QY	1	GACTAGGGCTGGAGAGGCCACCTTATGGTGTGGACGATCTGC 60
Db	29	GATTTGGAGGATGCCAACTGCTCATGCCACTTCTATGGAGGGGCTATGCC 88
QY	61	ACCATGGCTGGAGCTTGTGGTATGGAAATTACAGCCAAAGGTGTGGCAACAGC 120
Db	89	ACATGGGGGGTGTGATGGAAATTGGTATAGCCAAGGGTATGGACACTAAC 148
QY	121	GTGGCCGTGACACTGGCTTATTAACATGGATTAGTGTGGCTGTGCAATG 180
Db	149	GCAGCCTTAAGTACAGCACTTACACATGGTGTCTCCAAAGGGCTATACAGTC 208
QY	181	ACTTGACAAACGACCTAAATGGGCCCTCCGGACATTAGGGTACTGGCACCC 240
Db	209	ACTTGACAAATGAGCTCAATGGTGTCTCCAAAGGGCTATACAGTCACATAGT 268
QY	241	TTTGCCTCTAACTTGCTCCCTAACACATGGATGTTACAGTGTGCTGTGCA 300
Db	269	TTTGTCTCCGAACCGCGTCTACATTAACATATGGTGTGGTGTGCAATCTC 328
QY	301	CAAGACTTGCACTGGCTGAGCCCTGCCCTCTCAATGCTGATAACCGAGCTGGATC 360
Db	329	CAACATTGATGGACACACCCTCTGCAATCTAACACAGGGTATC 388
QY	361	GTCCCGCTCPCCTTGTAGGTACAGTAGTACACAACTGGCTGCTGCCAGGCCTC 420
Db	389	GTCCCGTGTACCTTGTAGGTACCTCTATGGAGAGGAAATTGACTA 448
QY	421	ATGGCCACTCACTCACTGGTGTGACGCAATGGTGTGGAGGTGTGCAATTG 480
Db	449	ATGGGACATCACTTCACTTGTTAGTGAACATGGTGTGGAGGTGTGCAATTG 508
Ov	481	CACTTGCTGCAAAAGGGTCTCGGAACATGGTGTGGAGGTGTGCAATTG 540

Db	509	CAATCAGTTTCATAAAGGGCTATACCTGGATGCCAACGATGTCAGATATGGGC	568
Qy	541	CAAACCTGGCAANGCAACACTACTCTCAATGGCCAAAGGCTTCTTCAGACTCT	600
Db	569	CAAAATTGGCAAGCAATCTTAATCTATAGTGCAAGTCCTTCATTCATGTCATGTC	628
Qy	601	AGTGATGGGGCAGACTCTACTGCTTATACTCTGTCCATTGGAAATGGCCAA	660
Db	629	AGTGATGGGAAGGACACTCATTTAGCAGACATGCTGCACCAAATAATTGGCAATTGGACA	688
Qy	661	ACCTATGAAAGGCCCTCAATT	680
Db	689	ACTTTGAAAGGGCTCAATT	708
RESULT 3			
LOCUS	AW574064	646 bp mRNA linear EST 07-SEP-2000	
DEFINITION	AW531655 GVN Medicago truncatula cDNA clone pgVN-51C8, mRNA sequence.		
ACCESSION	AW574064		
VERSION	AW574064.1		
KEYWORDS	EST		
SOURCE	barrel medic.		
ORGANISM	Medicago truncatula		
AUTHORS	Fedorova,M., Pierson,B.L., Samac,D.A., Vance,C.P., Gantt,J.S., Peng,H., Ellis,L., Town,C.D., Bowman,C.L., Craven,M.B., Hansen,T.S., Holt,I.E. and Fraser,C.M.		
TITLE	Ests from one month old nitrogen-fixing root nodules of Medicago truncatula (2000)		
JOURNAL	Contact: Carroll P. Vance Department of Agronomy and Plant Genetics University of Minnesota 411 Borlaug Hall 1991 Upper Buford Circle, St. Paul, MN 55108 USA Tel: 612 625 5715 Fax: 651-649-5508 Email: vance004@maroon.tc.umn.edu TIGR sequence name: MTCAR16TK More information is available at: <a href="http://vchrystie.tamu.edu/medicago/">http://vchrystie.tamu.edu/medicago/</a>		
COMMENT	Seq primer: SKMOD (CTA GAA CTA gtg gat cc). Location/Qualifiers		
FEATURES	source 1. . .646 /organism="Medicago truncatula" /cultivar="genotype A17" /db_xref="taxon:3880" /clone="GVN-51C8" /clone_id="GVN-51C8" /tissue_type="N2-fixing root nodules" /dev_stage="effective root nodules harvested one month post inoculation with Sinorhizobium meliloti" /lab_host="E. coli strain XL10XR" /note="Vector: pBluecript SK+; Site 1: EcoRI; Site 2: XbaI; cDNA was prepared from polyA+ enriched RNA from effective root nodules harvested one month post inoculation with sinorhizobium meliloti. The cDNA was directionally ligated into the Uni-ZAP XR vector from Stratagene and packaged using Gigapack III Gold Packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda ZAP phage using Ex-Assist helper phage and propagated in XL10XR cells." BASE COUNT ORIGIN		
LOCUS	AW574064		
DEFINITION	AW531655 GVN Medicago truncatula cDNA clone pgVN-51C8, mRNA sequence.		
ACCESSION	AW574064		
VERSION	AW574064.1		
KEYWORDS	EST		
SOURCE	barrel medic.		
ORGANISM	Medicago truncatula		
AUTHORS	Fedorova,M., Pierson,B.L., Samac,D.A., Vance,C.P., Gantt,J.S., Peng,H., Ellis,L., Town,C.D., Bowman,C.L., Craven,M.B., Hansen,T.S., Holt,I.E. and Fraser,C.M.		
TITLE	Ests from one month old nitrogen-fixing root nodules of Medicago truncatula (2000)		
JOURNAL	Contact: Carroll P. Vance Department of Agronomy and Plant Genetics University of Minnesota 411 Borlaug Hall 1991 Upper Buford Circle, St. Paul, MN 55108 USA Tel: 612 625 5715 Fax: 651-649-5508 Email: vance004@maroon.tc.umn.edu TIGR sequence name: MTCAR16TK More information is available at: <a href="http://vchrystie.tamu.edu/medicago/">http://vchrystie.tamu.edu/medicago/</a>		
COMMENT	Seq primer: SKMOD (CTA GAA CTA gtg gat cc). Location/Qualifiers		
FEATURES	source 1. . .646 /organism="Medicago truncatula" /cultivar="genotype A17" /db_xref="taxon:3880" /clone="GVN-51C8" /clone_id="GVN-51C8" /tissue_type="N2-fixing root nodules" /dev_stage="effective root nodules harvested one month post inoculation with Sinorhizobium meliloti" /lab_host="E. coli strain XL10XR" /note="Vector: pBluecript SK+; Site 1: EcoRI; Site 2: XbaI; cDNA was prepared from polyA+ enriched RNA from effective root nodules harvested one month post inoculation with sinorhizobium meliloti. The cDNA was directionally ligated into the Uni-ZAP XR vector from Stratagene and packaged using Gigapack III Gold Packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda ZAP phage using Ex-Assist helper phage and propagated in XL10XR cells." BASE COUNT ORIGIN		
LOCUS	BB131139	815 bp mRNA linear EST 20-FEB-2001	
DEFINITION	BB131139 L48-10903 Ice plant Lambda Uni-zap XR expression library, 48 hours NaCl treatment: Mesembryanthemum crystallinum cDNA clone L48-10905', mRNA sequence.		
ACCESSION	BB131139		
VERSION	BB131139.1		
KEYWORDS	EST		
SOURCE	common ice plant.		
ORGANISM	Mesembryanthemum crystallinum		
AUTHORS	Cushman, J.C.		
TITLE	An expressed sequence tag database for the common ice plant, Mesembryanthemum crystallinum unpublished (1997)		
JOURNAL	Contact: Cushman JC Department of Biochemistry University of Nevada MS200, Reno, NV 89557-0014, USA Tel: 775-784-1650		
COMMENT	Best Local Similarity 47.9%; Conservative 77.6%; Pred No. 6e-110; Indels 0; Gaps 0; Matches 479; Conservative 0; Mismatches 138; Indels 0; Gaps 0;		
Qy	64	ATGGGGGAGCTTGCGGTATGGAAATTATACACCCAGGTATGGCAGCACGGTG	123
Db	2	ATGGGGGGCTGCGTTATGGAAATTATACACCCAGGTATGGCAGCACGGTG	61
Qy	124	GCGCTGAGACTGCGTATTAACAGGAAATGGCTGCTGCTGCTGCTGCTG	183
Db	62	GCACTAAGACTGCTCTTCAACATGGATGAGTTGAGTGTGGCTCTGCTACAGATGAA	121
Qy	184	TGTACAAACACCTTAATGGCTTCCGGAACTTATAGGGCTACTGGCACCACRT	243
Db	122	TGTAAAGTAGGCCCTAAATGGCTTCCGGAACTTATAGGGCTACTGGCACCACRT	181
Qy	244	TGCCCTCTAATCTGCTCTCCAAACACATGGTGGATGTTGCGAACCCCTCCCTC	241
Db	182	TGCCCTCTAATCTGCTCTCCAAACACATGGTGGATGTTGCGAACCCCTCCCTC	181
Qy	304	CACTTGACAGATGGCTGAGGAAATGGCTCAATACCGAGCTGTTGCTG	363
Db	242	CACTTGACAGATGGCTGAGGAAATGGCTCAATACCGAGCTGTTGCTG	301
Qy	364	CCGGCTCTTCGTRGGTACCTGTTACATGGCTTCCAAATGGTGGACAT	423
Db	302	CCTATTCCTTCAGAAGAGTACCCGTTGAGAAGGAGAAATCACAATT	361
Qy	424	GGCCACATCATACTTCACCTGCTGTTGATCACAAGCTGCTGCTG	483
Db	422	TCTGTCCTCAAGGATCAAGACTGGATGAGCTGCTAGTCTAGA	481
Qy	544	ACTGGCAAGCAACACTATCTCAATGGCAAGGGCTTCTTCAGAAGT	603
Db	482	AAC TGCGCAAGCAATACATCTCAATGGCTCAAGCTCTCATGACT	541
Qy	604	GATGGTGCAGCTCTCTGCTGCTATACTCTCTCCATGGCAATTGGCCAA	663
Db	542	GATGGTGAAGTACTCACTAGCAACAAAGGTGGCTGCGCAATTGGCAATTGGACAGACA	601
Qy	664	TATGAGGCCCTCAATT	680
Db	602	TTTACAGGGGACAATT	618
RESULT 4			
LOCUS	BB131139	815 bp mRNA linear EST 20-FEB-2001	
DEFINITION	BB131139 L48-10903 Ice plant Lambda Uni-zap XR expression library, 48 hours NaCl treatment: Mesembryanthemum crystallinum cDNA clone L48-10905', mRNA sequence.		
ACCESSION	BB131139		
VERSION	BB131139.1		
KEYWORDS	EST		
SOURCE	common ice plant.		
ORGANISM	Mesembryanthemum crystallinum		
AUTHORS	Cushman, J.C.		
TITLE	An expressed sequence tag database for the common ice plant, Mesembryanthemum crystallinum unpublished (1997)		
JOURNAL	Contact: Cushman JC Department of Biochemistry University of Nevada MS200, Reno, NV 89557-0014, USA Tel: 775-784-1650		
COMMENT	Best Local Similarity 47.9%; Conservative 77.6%; Pred No. 6e-110; Indels 0; Gaps 0;		



QY	361	GRCCCCGSPCTCC"TCCTAGGGTACATGTAGAAGAAGTGAGTGAGTACATC	420	QY	1	GACTAGGTGCTGCCAGAGGCCACGCCCTTAATGGGGGGGAGCAAGCAGCATCTGGC	60
Db	373	GTCCCTGTTATGTTCAAAGGGGTCAGTGTGAGAAAGGAGGCATCACAGTACCATG	432	Db	36	GACAATGGGTTGCCAACATGCCATGCCACCTCTAGGGTGTGCTCATGCTACCGGC	95
QY	421	AATGGCCACTCATACTCAACCTCGTTGATGACAACAGCTGGCGAGGGACGTC	480	QY	61	ACCATGGGTGAGCTGTGGTATGGGAATTATACASGCCAAGGGTGTGGCAAGGAC	120
Db	433	AATGGACATTCTTACTCAACATGGGGTGTATAACGACAGTGGAGGTACCATG	492	Db	96	ACAATGGGGAGCTGTGGTTATGGAAACACTGTACAGTOAAGGGTATGACAGGAC	155
QY	481	CACTCTGTCGATAAGGGGTCGACTGATGGCAATCATGTTAGAAATGGGGC	540	QY	121	GTGGGCTGTGCACTGGGTATTACACAGGTTAGITGTGGCTGTGCTGAAATG	180
Db	493	ACCTCAGTGTCCATCAAGGGTCAGACAGGATGGCTACCTATGTCCAGAAATGGGC	552	Db	156	GCAGCTTGGACACTGACTGACTTCAACATGGCAATTGGCCTGCTGCTGAGGAC	215
QY	541	CAAACGTGCAAGCACAACATCTCAATGCCAAGGCCUTTCCCTTCAGTCACTT	600	QY	181	ACTGTACAAACGACCTTAATGGGCCUTCCGGCAACTTANGGTCACTGCCACAC	240
Db	553	CAAACGTGCAAGCACAACATCTCAATGCCAAGGCCUTTCCCTTCAGTCACTT	612	Db	216	CGGTCACAACTATGATCTCATGGTCATGTGCAACCTGACAGCAGCCACAC	275
QY	601	AGTGATGTCGACTCTCACTCCATAATCTGTCCTCTCCAAATGGCAATTGGCAA	660	QY	241	TTTGGCTCTCTAATCTGTCCTCTCCATAACACATGGTGTGATGGCAACCCCTCTC	300
Db	613	ACGGATGCGAGCTARTACAGCTACATGTAATGGCTGCTGTTGGCAATTGGACAA	672	Db	276	TTTGTCCACCTAACTATGCTTATCTAGTACATGGGGTGTGCAATTCCCAGGA	335
QY	661	ACCTATGAAGGCCCTCAAT 680		QY	301	CAACACTTCCACATGGCTGCGCUTGCCUTCTCAATGGCTAACTGGCTAAACGGACGTGATC	360
Db	673	ACTTTGAAAGGCCACT 692		Db	336	GAACACTTCAATTGGCGACCGCATTTTCAAGATGAGCAGATATGAGCAGTGA	395
<b>RESULT 6</b>							
BE055631				QY	361	GTCCCCGTCTCTTCGTAGGGTACATGTAGAAGAAGGTGGAGTGGAGTTACATC	420
LOCUS				Db	396	GTCCCTGTTATGTTCAAAGGGTCATGTGTGAGAAAGGACATGGTCACTGCCACAC	455
DEFINITION				QY	421	AATGGCCACTCATACTCTCAACCTCGTTGATCACAAAGGTCGTGGCGAGGAC	480
arboresum				Db	456	ATGGGACATCTGACTCTCACATGGCTGATACGAAACGTTGGAGGTCAGGGATA	515
ACCESSION				QY	481	CACTCTGTCGATAAGGGGTCGACTCTCACTGCTTGTGATACGAAACGTTGGAGG	540
BE055631				Db	516	ACGGTACTGTCATCAAGGTTCCAGACAGGAGGTACCTGTGCAAGAATGGGC	575
VERSION				QY	541	CAAACGTGCAAGCACAACATCTCAATGCCAAGGCCUTTCCCTTCAGTCACTT	600
KEYWORDS				Db	576	CAAACGTGCAAGCACAACATCTCAATGCCAAGGCCUTTCCCTTCAGTCACTT	635
SOURCE				QY	601	AGTGATGTCGACTCTCACTGCTTGTGATACGAAACGTTGGAGGTCAGGGATA	660
ORGANISM				Db	636	ACGGATGCGAGCTATCACAGCTAACATGTAGTAGTGCCTGCTGTTGGCAATTGGC	695
Gossypium arboresum.				QY	661	ACCTATGAAGG 671	
SPERMATOPHYTA; Magnoliophyta; eudicots; core eudicots;				Db	696	ACTGTGAAAG 706	
Rosidae; eurosids II; Malvales; Malvaceae; Gossypium.							
REFERENCE							
1 (bases 1 to 966)							
Wing, R.A., Frisch, D., Yu, Y., Main, D., Rambo, T., Simmons, J., Henry							
D., Wood, T.C., Leslie, A., and Wilkins, T.A.							
An integrated analysis of the genetics, development, and evolution							
of the cotton fiber							
Unpublished (2000)							
On Jun 8, 2000 this sequence version replaced gi:8382688.							
COMMENT							
Contact: Wing RA							
Clemson University Genomics Institute							
Clemson University							
100 Jordan Hall, Clemson, SC 29634, USA							
Tel: 864 656 7288							
Fax: 864 656 4293							
Email: rwting@clemson.edu							
Seq primer TAATCGACTATAGGG							
High quality sequence start: 4							
High quality sequence stop: 945.							
FEATURES							
source							
1. .966							
/organism="Gossypium arboresum"							
/cultivar="8400"							
/strain="AKA"							
/clone="GA_EAO031J22f"							
/clone_1b="Gossypium arboresum 7-10 dpa fiber library"							
/tissue_type="fibers isolated from bolls harvested 7-10							
dpa,"							
/lab_host="E. coli"							
/note="Vector: pBK-CMV; Site_1: EcoRI; Site_2: XbaI"							
BASE COUNT							
ORIGIN	266	a	201	c	241	g	257
Query Match	56.1%		Score 382;	DB 9;	Length 966;		
Best Local Similarity	73.0%		Pred. No. 2	5e-105;			
Matches	490;		Conservative	0;	Mismatches 181;	Indels 0;	Gaps 0;

Email: cbm@arizona.edu  
An open reading frame exists.  
FEATURES  
source  
Location/Qualifiers  
1. .775

/organism="Nesembryanthemum crystallinum"  
'clone\_1ib="ML"  
'tissue\_type="flowers and developing seedpods"  
'dev\_stage="12 weeks in 500mM NaCl"  
/note="6 weeks in 500mM NaCl"

BASE COUNT  
ORIGIN  
Query Match 54.2%; Score 368.8; DB 9; Length 775;  
Best Local Similarity 75.5%; Pred. No. 2.3e-101; Mismatches 152; Indels 1; Gaps 1;  
Matches 471; Conservative 0; Mismatches 152; Indels 1; Gaps 1;  
/db\_xref="taxon:3544"  
Qy 7 GGTGGCTGCAGGCCACGGCACCTTATGGTGTGGGACGCCATCGGCCACATG 66  
Db 144 GGTTGGTGTGTCATATGTCATGCCACATTAGGGAGGACACGGGGACGCCACTG 203  
Qy 67 GGTTGGAGCTTGTTGGTATGGGAATTACACCCAGGGTAGCAGAACGGGGCG 126  
Db 204 GGTTGGTGTGTCATGGTATGGGAATTACACCCAGGGTAGCAGAACGGGGCG 263  
Qy 127 CTGAGCACTGCGGTTAAACAGGATAAGTGTGGTGTGCTCGAATGACTGT 186  
Db 264 TTAGCAGGGCCCTCTCAATACAGGGTTGACTGTGGAGCTGTGATGAATGT 323  
Qy 187 ACAACAGACCTTAATGGTGCCTCCGGAACTATTAGGTGACTGCAACACTT 246  
Db 324 AACAGACGACCAAGATGGTGCACAGGAACTGTACAGACGGTACACCGCGGCC 383  
Qy 247 CCTCTTACTTCTCTCCCTAACAAATGGGGAGGTGCTACCAATTCACAC 306  
Db 384 CCCTCTTACTTCTCTCTGGCTAACACATGGGGTGGTCAACCCCTTCAGCAC 443  
Qy 307 TTGACATGGCTGAGCTGCCCTCTCAATGGCTAACACGGCTGGTATGCCCC 366  
Db 444 TTGACAGGGCTAACCTGCTTTGGAGATGGCCAATACAAGCTGGATAGRCCT 503  
Qy 367 GTCTCTTCTGTTGGTACCATGATGAGAAGGGTGGAGTGGTTCACATCAATGGC 426  
Db 504 ATTCCTCTGAGGGTACCCCTGATGGAAAGGGATAGGGTCACATAACGGA 563  
Qy 427 CACTCATCTCACCCTGTTGATCACAAAGCTGCTGGCGAGGTTCTCT 486  
Db 564 CACTCTCTTCACTTACCTCTGGTCTCATCCACGGTGGGGTGGTCACTTC 623  
Qy 487 GTCTGCTATAAGGGCTCGAACCTGGATGGCTAACCCATGTCAGAAATGGGCCAAC 546  
Db 624 GTGTCGATCAAGGGTTCGAAGACCGGGTGGCAACCCATGTAGATCTGGTCCAAAC 683  
Qy 547 TGGAAAGAACACTATCTCAATGGCCAAGGGCTTCTCTCAACTCTCTAGTGA 605  
Db 684 TGGCAAATTAACCTTACCTTAACGGCCAACCCCTGGCCCTAAGGCTACCGTAGCGA 743  
Qy 606 TGGTGGACTCTTCACTGGCTATA 629  
Db 744 CGGAGGGACCGTGTAGCACAA 767

RESULT 8  
B1309709  
LOCUS B1309709 mRNA linear EST 20-JUL-2001  
DEFINITION BST531119 GRPOD *Medicago truncatula* cDNA clone pGPOD-13L4 5' end,  
ACCESSION BT1309709  
VERSION B1309709.1 GI:14984036  
KEYWORD ESR  
SOURCE barrel medic.  
ORGANISM *Medicago truncatula*  
Eukaryota; Viridiplanteae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicots; core eudicots;  
Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Trifolieae;  
Medicago; eurosidic; eurosidic I (bases 1 to 741)  
REFERENCE  
AUTHORS 'J. and Fraser, C.M.  
TITLE Unpublished (2001)  
JOURNAL Contact: Michael A. Grusak  
COMMENT USDA/FARS Children's Nutrition Research Center  
Baylor College of Medicine, 1100 Bates Street, Houston, TX 77030-2600, USA  
Tel: 713-798-7044  
Fax: 713-798-7078  
Email: mgrusak@bcm.tmc.edu  
B306564e  
TIGR sequence name: MTBJT2TK  
More information is available at: www.medicago.org  
Seq primer: SKMOD (CTA 9AA CTA 9TG 9AT CC).  
FEATURES  
source  
Location/Qualifiers  
1. .741  
/db\_xref="taxon:3880"  
/clone\_1ib="GRPOD-13L4"  
/tissue\_type="immature pod walls"  
/dev\_stage="Immature pods, ranging in age from 15 to 30 days after pollination"  
/note="Vector: pBluescript SK-; Site\_1: EcoRI; Site\_2: XbaI; Immature pods, ranging in age from 15 to 30 days after pollination, were collected from greenhouse-grown plants. At harvest, seeds were removed from pods and isolated pod walls were collected and immediately frozen in liquid nitrogen. Pod walls were pooled for mRNA extraction. cDNA was prepared from polyA+ enriched vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-zap phage using Ex-assist helper phage and propagated in XLOR cells."

BASE COUNT  
ORIGIN  
Query Match 54.0%; Score 367.8; DB 10; Length 741;  
Best Local Similarity 78.0%; Pred. No. 4.6e-101; Mismatches 127; Indels 1; Gaps 1;  
Matches 455; Conservative 0; Mismatches 127; Indels 1; Gaps 1;  
/db\_xref="taxon:3544"  
Qy 2 ACTACGGTGTGGCGAGGCCAGGCCACCTTATGGGGGTGGTGGACGACTGCA 61  
Db 159 ACGGAGGTGGAGGGAAATGCTCATGCCACATTATGGTGGAGATGCTCAGGCA 218  
Qy 62 CCATGGTGGAGCTGGGGTATGGAAATTATACAGCCAGGGTATGCCACACGG 121  
Db 219 CAATGGGAGGGCTGGTGGTATGGAAATTGTATAGCCAGGTTATGGACACACTG 278  
Qy 122 TGGCCTGAGGACTGGCTTTAACAACTGGTAAAGTGTGGGGCTTCTTCAATGA 181  
Db 279 CTGCACTAATGACTCTCTTCAACAACTGGTGGTGGGTCTGGTAGGAGTGA 338  
Qy 182 CTGGTACAAAGGACCTTAATGGTGGCTCTGGGACTATTAGGTGACTGCCACACT 241  
Db 339 ATGTTACAGTGACCTTAATGGTGGCTCTGGTAGTATTGGTACTGCTACAATCT 398  
Qy 242 TTGGCCTCTTCAACTTGTGCTCCCTAACACAAATGGTGGATGGTGGACCCCTCTC 301  
Db 399 TCTGCCCTCAACCTTGTGAGGACTTAATGGTGGATGGTGGACCCCTCTC 458  
Qy 302 AACACTTGAGATGGTGTGGCTCTTCAATACGGCTAACACGGCTGTATCG 361  
Db 459 AGCACTTGTGCTCTGGACCTGGTCTCTAACATGGCTAACACGGCTGAATCA 518  
Qy 362 TCCCGTCTCTTGTAGGGTACCATGTAGAAGAAGGGGGAGTGGAGTTACAATCA 421

Db 62 TTGAGCTGTGGAGCTTGCTATGAAATGAAATGTAACGACGCCAAGATGTSGCCACCCA 121  
 Qy 214 GGAACATATTAGGGTCACTGCCAACACTTTSGCCCTCTACACTTGCCTCTCAACAC 273  
 Db 122 GGAAGCATTTAATGTCACTGCTTACCAATTCTGCCACCTTACHTTGCCTTGCTACAC 181  
 Qy 274 ATGGTGGATGGTCAACCCCTCCCTCCACACTTCGACATGCTGCCCTGCCCTT 333  
 Db 182 ATGGTGGGTTGCAACCCCTCCCTCAGACHTTGCATGGCTCAACCTGCTT 241  
 Qy 334 CAATGCTCAATACCGAGCTGGTATCGTCCCCCTCTCTTGTAGGTACATGTG 393  
 Db 242 AAGATGCCAATACAAGCTGGTATGCTTCAAGCTTACTCCACTTCAACCTGGCTTC 361  
 Qy 394 AAGAAGGTGAGTGAGGTACATCAATGGCCACTCTACACTCAGCTCGTTGATC 453  
 Db 422 TGGCACATCTGCTAGAATGGCCAAACACTGCAANCAACAACTATCTCAATGCC 573  
 Qy 544 ACAACGTCGGCCAGCGACGTCACACTCTGTGCTGATAAGGGTCTCCACCTGGA 513  
 Db 362 TCCAACGGTGTGGCGGTGACGCTTCAACTCCGTGTCATCAAGGGTGGAGACCGT 421  
 Qy 514 TGCCATTCATGCTAGAATGGCCAAACACTGCAANCAACAACTATCTCAATGCC 681  
 Db 482 CAAGCCCTGCTTCAGGTACCGCTAGGACGGACGGTGAATGCAACACATTG 541  
 Qy 634 GTTCCCTCAATTGGCAATTGGCCAAACCTATGAGGGCTCAATTTC 681  
 Db 542 GTTCCCTGCTCAATTGGCAATTGGCAGACATTGGGGTGGCCCAATTC 589

**RESULT 9**

LOCUS Bf479593 mRNA linear EST 20-FEB-2001  
 DEFINITION L48-3281T3 ice plant Lambda Uni-Zap XR expression library, 48 hours  
 NACL treatment Mesembryanthemum crystallinum cDNA clone L48-3281  
 5', mRNA sequence.

ACCESSION Bf479593  
 VERSION Bf479593.1 GI:11550420  
 KEYWORDS EST.  
 SOURCE common ice plant.  
 ORGANISM Mesembryanthemum crystallinum  
 Spermato phyta; Viridiplanteae; Streptophyta; Embryophyta; Tracheophyta;  
 Caryophyllidae; Caryophyllales; Alzoaceae; Mesembryanthemum.  
 REFERENCE 1 (bases 1 to 706)  
 AUTHORS Cushman, J.C.  
 TITLE An expressed sequence tag database for the common ice plant,  
 Mesembryanthemum crystallinum  
 JOURNAL Unpublished (1997)  
 COMMENT Contact: Cushman, JC  
 Department of Biochemistry  
 University of Nevada  
 MS200, Reno, NV 89557-0014, USA  
 Tel: 775-784-1918  
 Fax: 775-784-1650  
 Email: jc.cushman@unr.edu  
 PCR PRIMERS  
 FORWARD: T7  
 BACKWARD: T3  
 Plate: L48-33 row: G column: 9  
 Seq primer: T3  
 High quality sequence stop: 350  
 POLYA=NO  
 FEATURES source  
 . . .  
 /organism="Mesembryanthemum crystallinum"  
 /db\_xref="taxon:3544"  
 /clone="L48-3281"  
 /clone\_lib="ice plant Lambda Uni-Zap XR expression library  
 , 48 hours NaCl treatment"  
 /tissue\_type="Leaf, 48 h 0.4M NaCl"  
 /dev\_stage="Six week old"  
 /note="Vector: Lambda Uni-Zap XR, Bluescript SK-; Site\_1:  
 EcoRI; Site\_2: XbaI"  
 BASE COUNT  
 ORIGIN 187 a 176 c 162 g 181 t  

Query Match 53.7%; Score 365.6; DB 10; Length 706;  
 Best Local Similarity 76.4%; Pred. No. 2.1e-100;  
 Matches 449; Conservative 0; Mismatches 139; Indels 0; Gaps 0;

Qy 94 TACAGCCAAGGGTATGCCAGCACGAGCTGGCTATTACAAATGAA 153  
 Db 2 TACAGCCAAGGGTACCGGACTACACCGGCCCTCATACCGGG 61  
 Qy 154 TTAGTGTGGTCTTGCTTGGAAATGACTTGTCACAGGCCCTAATGGCTTCG 213

Db 62 TTGAGCTGTGGAGCTTGCTATGAAATGAAATGTAACGACGCCAAGATGTSGCCACCCA 121  
 Qy 214 GGAACATATTAGGGTCACTGCCAACACTTTSGCCCTCTACACTTGCCTCTCAACAC 273  
 Db 122 GGAAGCATTTAATGTCACTGCTTACCAATTCTGCCACCTTACHTTGCCTTGCTACAC 181  
 Qy 274 ATGGTGGATGGTCAACCCCTCCCTCCACACTTCGACATGCTGCCCTGCCCTT 333  
 Db 182 ATGGTGGGTTGCAACCCCTCCCTCAGACHTTGCATGGCTCAACCTGCTT 241  
 Qy 334 CAATGCTCAATACCGAGCTGGTATCGTCCCCCTCTCTTGTAGGTACATGTG 393  
 Db 242 AAGATGCCAATACAAGCTGGTATGCTTCAAGCTTACTCCACTTCAACCTGGCTTC 361  
 Qy 394 AAGAAGGTGAGTGAGGTACATCAATGGCCACTCTACACTCAGCTCGTTGATC 453  
 Db 422 TGGCACATTCATGCTAGAATGGCCAAACACTGCAANCAACAACTATCTCAATGCC 573  
 Qy 544 ACAACGTCGGCCAGCGACGTCACACTCTGTGCTGATAAGGGTCTCCACCTGGA 513  
 Db 362 TCCAACGGTGTGGCGGTGACGCTTCAACTCCGTGTCATCAAGGGTGGAGACCGT 421  
 Qy 514 TGCCATTCATGCTAGAATGGCCAAACACTGCAANCAACAACTATCTCAATGCC 681  
 Db 482 CAAGCCCTGCTTCAGGTACCGCTAGGACGGACGGTGAATGCAACACATTG 541  
 Qy 634 GTTCCCTCAATTGGCAATTGGCCAAACCTATGAGGGCTCAATTTC 681  
 Db 542 GTTCCCTGCTCAATTGGCAATTGGCAGACATTGGGGTGGCTCAATTC 589

**RESULT 10**

LOCUS AW776306 mRNA linear EST 07-SEP-2000  
 DEFINITION EST:35371 DSIL Medicago truncatula cDNA clone PDSIL-7M2, mRNA  
 sequence.

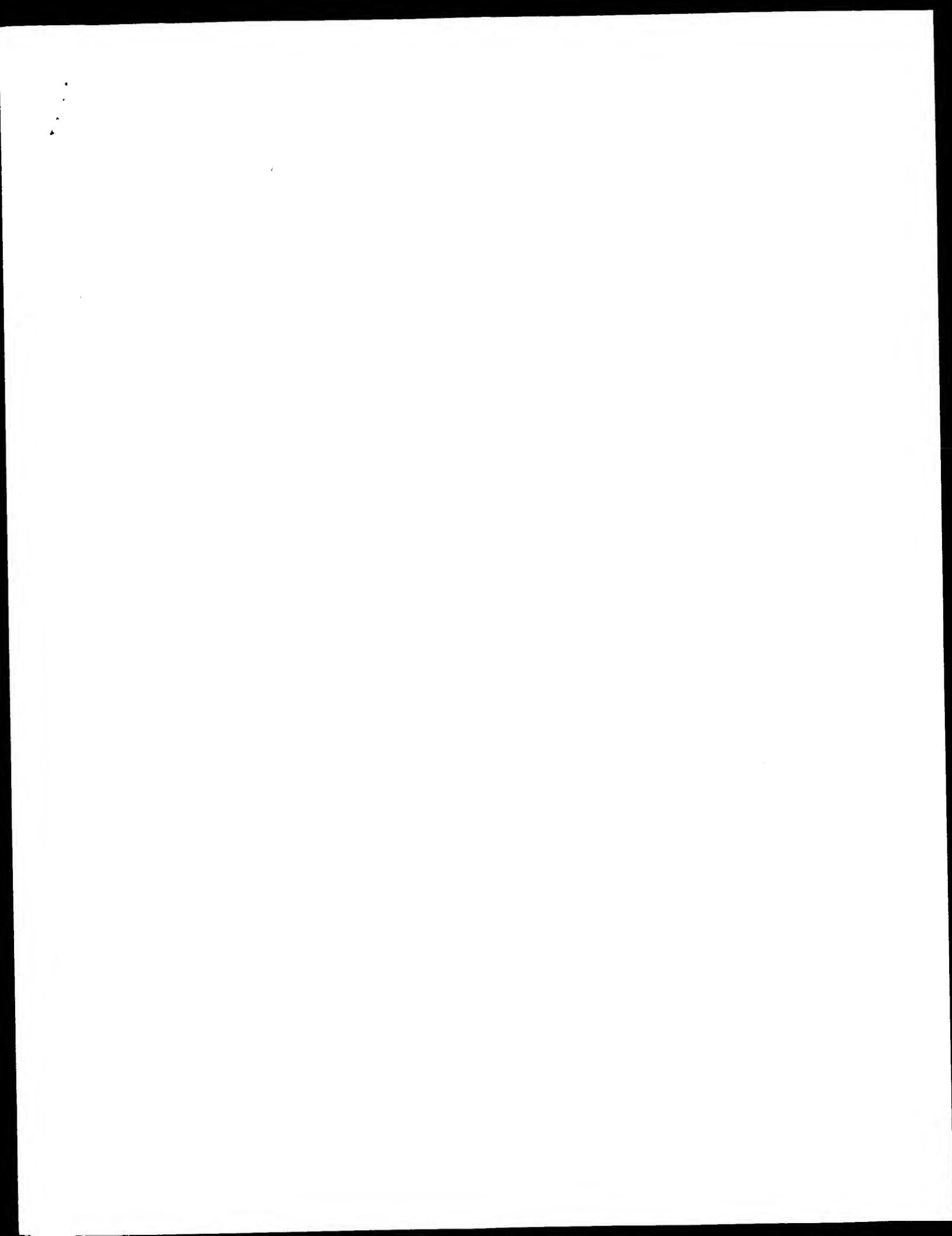
ACCESSION AW776306  
 VERSION AW776306.1 GI:7766119  
 KEYWORDS barrel medic.  
 SOURCE Medicago truncatula  
 ORGANISM Spermato phyta; Viridiplanteae; Streptophyta; Embryophyta; Tracheophyta;  
 Rosidae; eudicots; Fabales; Papilionoideae; Trifoliaceae; Medicago.  
 REFERENCE 1 (bases 1 to 668)  
 AUTHORS Fedorov, M., Pierson, B. L., Samac, D. A., Vance, C. P., Gantt, G. S., Peng,  
 H., Ellis, L., Town, C. D., Bowman, C. L., Craven, M. B., Hansen, T. S.,  
 Holt, I. E. and Fraser, C. M.  
 TITLE ESTs from leaves of *Medicago truncatula* after inoculation with  
*Colletotrichum trifolii* (published 2000)  
 JOURNAL Unpublished (2000)  
 COMMENT Contact: Deborah A. Samac  
 Department of Plant Pathology  
 University of Minnesota  
 495 Borlaug Hall, 1991 Upper Buford Circle, St. Paul, MN 55108, USA  
 Tel: 612 635 1243  
 Fax: 651 649 5058  
 Email: debbys@puccini.crl.umn.edu  
 Minnesota sequence name:M259639E  
 TIGR sequence name:MFAR13TK  
 More information is available at: .  
<http://Chrisie.tamu.edu/medicago>  
 Seq primer: SKMO (CIA 9AM CTA gtg gAT CC).  
 FEATURES source  
 . . .  
 /organism="Medicago truncatula"  
 /cultivar="genotype A17"  
 /db\_xref="taxon:3880"  
 /db\_xref="taxon:3880"

BASE COUNT		FEATURES		SOURCE	ORGANISM
	source			Glycine max/Phytophthora sojae mixed EST library.	Glycine max/Phytophthora sojae mixed EST library.
181	a	118	c	156 g	157 t
Query Match	52.8%	Score	359.4;	DB 9;	Length 668;
Best Local Similarity	78.1%	Pred. No.	1.6e-98;		
Matches	432;	Mismatches	121;	Indels	0;
QY	1	GACTACGCTGGCGAGCAGGCCACCTTATGCTGTTGAGCACTGTGC	60		
Db	116	GTTATGTTGGGGAGTCATCATGCTACTTCTATGTTGTTGATGCTTG	175		
QY	61	ACCATGGTGGAGCTTGTGGTATGGAAATTATACAGCCAGGGATGGC	120		
Db	176	AATGGTGGACATGGATAATTAGCCAGATGGAAACACA	235		
QY	121	GNGGCGTGACACTGGCTATTACAATGGATAAGTGTGTTCTCGAATG	180		
Db	236	GAGCACTAAGCACTGGCTTCAACATGGTAAAGCAGTGTCTGTAAGA	295		
QY	181	ACTGTACAAACGACCCATAATGGCTTGGGAACTTATGGTCACTGCA	240		
Db	296	AGATGCAATGATGATGCAAGATGGTCAACCTCTTGAAC	300		
QY	241	TITGCTCTACTTGTCTCCAAAGAACATGGTGGATGGTGTGTTGATCC	415		
Db	356	TITGCTCACCACATGCTTGCCTAACATGGTGGTGTGTTGATCCCTTG	415		
QY	301	CAACACTCGACATGGCTGACCTCTTCAATGCTCATAACGGCTGTTAC	360		
Db	416	CAACATTTGATGGCTGAGCCCTACCTTCAATGATAGAGCTGAAAT	475		
QY	361	GTCCCGGTCTCTTCTGTTGAGGTACATGATGAGAAGGTGAGGTTC	420		
Db	476	GTGCCGTGTTCTTGTAGAAGGGTGCATGTTCAAAAGGGAGGAGTAAG	535		
QY	421	AATGGCCACTCATCTTCAACCTGTTGATCAXAAGCTGGGGCAGGGAC	480		
Db	536	AATGGCCACTCATCTTCAACCTGTTGATCCTAACATGGTGGACTGGG	595		
QY	481	CACCTGTGCGAAGGGCTCGAAGTGGCAATCCATGTCAGAAATTGGGC	540		
Db	596	CATCTTATATCCTACAAAGGGTCAAGACTGGGCAACCAATGTCAGAAAT	655		
QY	541	CAAACATGGAAA	53		
Db	656	CAAATGGCAA	668		
RESULT 11					
BE584282	BEST 7-3E-HA_PsojaeHA	654 bp mRNA	linear	EST 16-AUG-2000	
DEFINITION					
CDNA, mRNA sequence.					
VERSION	BE584282				
KEYWORDS	EST.				

		Query Match	52.4%	Score	357;	DB	10;	Length	752;
		Best Local Similarity	77.6%	Pred.	No.	9	.2e-98;		
		Matches	432;	Conservative	0;	Mismatches	125;	Indels	0;
QY	469	GGAGGCCACGTCACACTCTGTGCGATAAGGGTCTCGAAGCTGAACTCATGTC	528						
Db	361	GCGAGGATGTCATTCATGTCATCAANGCTCAAGGCCTGGCAACCATGCT	420						
QY	529	AGAAATGGGCCAACACTGGCAAAGCAGCACACTATCTCAATGCCAACGCCCTTCCTT	588						
Db	421	AGAAACTGGGCCAGATTGCCAMGCAATTCTTACCTCAATGGCAAGCCCTCTCTTT	480						
QY	589	CAGTCACTCTAGTGATGGGCCACTCTCACTGCTATAUTGTCGTCCTCAATGG	648						
Db	481	CAGGTCACTACAGTGTGTCAGCTACTAGCACACACAGTGTGCTGCTGTA	540						
QY	649	CATTGGCCAAACCTATGAGGCCCTCAATTC	681						
Db	541	CATTGGACAACTTGTGAGGGCACAGTTC	573						
RESULT 12									
B1311879									
LOCUS	B1311879								
DEFINITION	EST531329	GSFD Medicago truncatula	752 bp	mRNA	linear	EST	20-JUL-2001		
ACCESSION									
VERSION	B1311879.1								
KEYWORDS	EST,								
SOURCE	Medicago truncatula								
ORGANISM	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicots; core eudicots; Rosidae; euosids I; Fabales; Fabaceae; Papilionoideae; Trifoliales; Medicagogo.								
REFERENCE	Grusak, M.A., Samac, D.A., Town, C.D., Van Aken, S., Utterback, T., Cho J., and Frazer, C.M.								
AUTHORS									
TITLE	Unpublished (2001)								
JOURNAL									
COMMENT	Contact: Michael A. Grusak USDA/ARS Children's Nutrition Research Center Baylor College of Medicine 1100 Bates Street, Houston, TX 77030-2600, USA Tel: 713-798-7044 Fax: 713-798-7078 Email: m.grusak@bcom.tmc.edu								
B1311879									
TTGR sequence name: MTPB16TK									
More information is available at: <a href="http://www.medicago.org">www.medicago.org</a>									
Seq primer: SKmod (CMA gaa CTA gtg GAT CCC).									
FEATURES	source	Location/Qualifiers							
1	.752								
/organism="Medicago truncatula"									
/cultivar="A17"									
/ab_xref="taxon:3880"									
/clone="PGESD1508"									
/clone_id="GESD"									
/tissue_type="immature seeds"									
/rev_stage="Immature seeds, 11 to 19 days after pollination"									
/notes="vector: pBluscript SK-; Site_1: EcoRI; Site_2: XbaI; Immature seeds, collected from pods ranging in age from 11 to 19 days after pollination, were harvested from greenhouse-grown plants. Seeds were removed and separated from pod walls and were immediately frozen in liquid nitrogen. Seeds throughout the age range were pooled for mRNA extraction. cDNA was prepared from PolyA+ enriched RNA. The cDNA was directionally ligated into the Unilap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-zap XLOR cells. Ex-assist helper phage and propagated in									
B1311879									
TTGR sequence name: MTPB16TK									
More information is available at: <a href="http://www.medicago.org">www.medicago.org</a>									
Seq primer: SKmod (CMA gaa CTA gtg GAT CCC).									
FEATURES	source	Location/Qualifiers							
1	.752								
/organism="Medicago truncatula"									
/cultivar="A17"									
/ab_xref="taxon:3880"									
/clone="PGESD1508"									
/clone_id="GESD"									
/tissue_type="immature seeds"									
/rev_stage="Immature seeds, 11 to 19 days after pollination"									
/notes="vector: pBluscript SK-; Site_1: EcoRI; Site_2: XbaI; Immature seeds, collected from pods ranging in age from 11 to 19 days after pollination, were harvested from greenhouse-grown plants. Seeds were removed and separated from pod walls and were immediately frozen in liquid nitrogen. Seeds throughout the age range were pooled for mRNA extraction. cDNA was prepared from PolyA+ enriched RNA. The cDNA was directionally ligated into the Unilap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-zap XLOR cells. Ex-assist helper phage and propagated in									
B131078									
TTGR sequence name: MTPB16TK									
More information is available at: <a href="http://www.medicago.org">www.medicago.org</a>									
Seq primer: SKmod (CMA gaa CTA gtg GAT CCC).									
FEATURES	source	Location/Qualifiers							
1	.752								
/organism="Medicago truncatula"									
/cultivar="A17"									
/ab_xref="taxon:3880"									
/clone="PGESD1508"									
/clone_id="GESD"									
/tissue_type="immature seeds"									
/rev_stage="Immature seeds, 11 to 19 days after pollination"									
/notes="vector: pBluscript SK-; Site_1: EcoRI; Site_2: XbaI; Immature seeds, collected from pods ranging in age from 11 to 19 days after pollination, were harvested from greenhouse-grown plants. Seeds were removed and separated from pod walls and were immediately frozen in liquid nitrogen. Seeds throughout the age range were pooled for mRNA extraction. cDNA was prepared from PolyA+ enriched RNA. The cDNA was directionally ligated into the Unilap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-zap XLOR cells. Ex-assist helper phage and propagated in									
B131078									
TTGR sequence name: MTPB16TK									
More information is available at: <a href="http://www.medicago.org">www.medicago.org</a>									
Seq primer: SKmod (CMA gaa CTA gtg GAT CCC).									
FEATURES	source	Location/Qualifiers							
1	.752								
/organism="Medicago truncatula"									
/cultivar="A17"									
/ab_xref="taxon:3880"									
/clone="PGESD1508"									
/clone_id="GESD"									
/tissue_type="immature seeds"									
/rev_stage="Immature seeds, 11 to 19 days after pollination"									
/notes="vector: pBluscript SK-; Site_1: EcoRI; Site_2: XbaI; Immature seeds, collected from pods ranging in age from 11 to 19 days after pollination, were harvested from greenhouse-grown plants. Seeds were removed and separated from pod walls and were immediately frozen in liquid nitrogen. Seeds throughout the age range were pooled for mRNA extraction. cDNA was prepared from PolyA+ enriched RNA. The cDNA was directionally ligated into the Unilap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-zap XLOR cells. Ex-assist helper phage and propagated in									
B131078									
TTGR sequence name: MTPB16TK									
More information is available at: <a href="http://www.medicago.org">www.medicago.org</a>									
Seq primer: SKmod (CMA gaa CTA gtg GAT CCC).									
FEATURES	source	Location/Qualifiers							
1	.752								
/organism="Lycopersicon esculentum"									
/cultivar="A17"									
/ab_xref="taxon:3880"									
/clone="PGESD1508"									
/clone_id="GESD"									
/tissue_type="immature seeds"									
/rev_stage="Immature seeds, 11 to 19 days after pollination"									
/notes="vector: pBluscript SK-; Site_1: EcoRI; Site_2: XbaI; Immature seeds, collected from pods ranging in age from 11 to 19 days after pollination, were harvested from greenhouse-grown plants. Seeds were removed and separated from pod walls and were immediately frozen in liquid nitrogen. Seeds throughout the age range were pooled for mRNA extraction. cDNA was prepared from PolyA+ enriched RNA. The cDNA was directionally ligated into the Unilap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-zap XLOR cells. Ex-assist helper phage and propagated in									
B131078									
TTGR sequence name: MTPB16TK									
More information is available at: <a href="http://www.medicago.org">www.medicago.org</a>									
Seq primer: SKmod (CMA gaa CTA gtg GAT CCC).									
FEATURES	source	Location/Qualifiers							
1	.752								
/organism="Lycopersicon esculentum"									
/cultivar="A17"									
/ab_xref="taxon:3880"									
/clone="PGESD1508"									
/clone_id="GESD"									
/tissue_type="immature seeds"									
/rev_stage="Immature seeds, 11 to 19 days after pollination"									
/notes="vector: pBluscript SK-; Site_1: EcoRI; Site_2: XbaI; Immature seeds, collected from pods ranging in age from 11 to 19 days after pollination, were harvested from greenhouse-grown plants. Seeds were removed and separated from pod walls and were immediately frozen in liquid nitrogen. Seeds throughout the age range were pooled for mRNA extraction. cDNA was prepared from PolyA+ enriched RNA. The cDNA was directionally ligated into the Unilap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-zap XLOR cells. Ex-assist helper phage and propagated in									
B131078									
TTGR sequence name: MTPB16TK									
More information is available at: <a href="http://www.medicago.org">www.medicago.org</a>									
Seq primer: SKmod (CMA gaa CTA gtg GAT CCC).									
FEATURES	source	Location/Qualifiers							
1	.752								
/organism="Lycopersicon esculentum"									
/cultivar="A17"									
/ab_xref="taxon:3880"									
/clone="PGESD1508"									
/clone_id="GESD"									
/tissue_type="immature seeds"									
/rev_stage="Immature seeds, 11 to 19 days after pollination"									
/notes="vector: pBluscript SK-; Site_1: EcoRI; Site_2: XbaI; Immature seeds, collected from pods ranging in age from 11 to 19 days after pollination, were harvested from greenhouse-grown plants. Seeds were removed and separated from pod walls and were immediately frozen in liquid nitrogen. Seeds throughout the age range were pooled for mRNA extraction. cDNA was prepared from PolyA+ enriched RNA. The cDNA was directionally ligated into the Unilap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-zap XLOR cells. Ex-assist helper phage and propagated in									
B131078									
TTGR sequence name: MTPB16TK									
More information is available at: <a href="http://www.medicago.org">www.medicago.org</a>									
Seq primer: SKmod (CMA gaa CTA gtg GAT CCC).									
FEATURES	source	Location/Qualifiers							
1	.752								
/organism="Lycopersicon esculentum"									
/cultivar="A17"									
/ab_xref="taxon:3880"									
/clone="PGESD1508"									
/clone_id="GESD"									
/tissue_type="immature seeds"									
/rev_stage="Immature seeds, 11 to 19 days after pollination"									
/notes="vector: pBluscript SK-; Site_1: EcoRI; Site_2: XbaI; Immature seeds, collected from pods ranging in age from 11 to 19 days after pollination, were harvested from greenhouse-grown plants. Seeds were removed and separated from pod walls and were immediately frozen in liquid nitrogen. Seeds throughout the age range were pooled for mRNA extraction. cDNA was prepared from PolyA+ enriched RNA. The cDNA was directionally ligated into the Unilap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-zap XLOR cells. Ex-assist helper phage and propagated in									
B131078									
TTGR sequence name: MTPB16TK									
More information is available at: <a href="http://www.medicago.org">www.medicago.org</a>									
Seq primer: SKmod (CMA gaa CTA gtg GAT CCC).									
FEATURES	source	Location/Qualifiers							
1	.752								
/organism="Lycopersicon esculentum"									
/cultivar="A17"									
/ab_xref="taxon:3880"									
/clone="PGESD1508"									
/clone_id="GESD"									
/tissue_type="immature seeds"									
/rev_stage="Immature seeds, 11 to 19 days after pollination"									
/notes="vector: pBluscript SK-; Site_1: EcoRI; Site_2: XbaI; Immature seeds, collected from pods ranging in age from 11 to 19 days after pollination, were harvested from greenhouse-grown plants. Seeds were removed and separated from pod walls and were immediately frozen in liquid nitrogen. Seeds throughout the age range were pooled for mRNA extraction. cDNA was prepared from PolyA+ enriched RNA. The cDNA was directionally ligated into the Unilap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-zap XLOR cells. Ex-assist helper phage and propagated in									
B131078									
TTGR sequence name: MTPB16TK									
More information is available at: <a href="http://www.medicago.org">www.medicago.org</a>									
Seq primer: SKmod (CMA gaa CTA gtg GAT CCC).									
FEATURES	source	Location/Qualifiers							
1	.752								

FEATURES	Seq primer: T3 Location/Qualifiers	
source	Best Local Similarity 75.2%; Pred. No. 1; 3e-197; Mismatches 457; Conservative 0; Indels 1; Gaps 1;	
BASE COUNT	187 a 143 c 147 g 233 t	
ORIGIN	a size-separated while remaining frozen.	
Query Match	52.3%; Score 356; DB 10; Length 710;	
Best Local Similarity 75.2%; Pred. No. 1; 3e-197; Mismatches 457; Conservative 0; Indels 1; Gaps 1;	G /clone_1lb="tomato flower, 8 mm to preanthesis buds" <highlight>/tissue</highlight> type="flower" <highlight>/dev_stage</highlight> "buds 8mm to preanthesis" <highlight>/note</highlight>"Vector: pBluescript SK(-); Site_1: EcoRI; Site_2: XbaI; supplier: Cornell University; sequencing: The Institute for Genomic Research; Flower buds and flowers were taken from greenhouse plants (4-8 wks old, TA496). They were immediately frozen in liquid nitrogen and then	
Query	1 GACTACGGTGGTGGCAGGCCACGCCACCTTATGGTGGTGGTGGACGATCTGC 60	
Db	100 GATTATGGGAGATGGCAACTGTCATGCCACTTCATGGGGGTGATGCGCTCGGC 159	
Qy	61 ACCATGGTGGAGCTTGCGGGATGGATAACAGCCAGGGTATGCGACACAGC 120	
Db	160 ACATGGGGGCTTGTGGATATGGAAATTGTGATACCAAGGGTATGGAACACT 219	
Qy	121 GTGCCGCTGAGACTGCCATTAACTAACATGGATTAGTGTGGTGTGCTTGAAATG 180	
Db	220 GCAGCAGTAACTAGACGACTATTCACATTATGGTTAACCTTGCTGTGCTGTGTC 279	
Qy	181 ACTGTGACAAACGCCCTAATGGTGCCTCCGGAACTTATGGGCACTGCGACAC 240	
Db	280 ACTGTGACAACTGAGCTTAATGGTGTCTCAACAGGGACTATTACTGTCACTAAT 339	
Qy	241 TTATGGCCCTCTAATCTACTTGTCTCCCTACAAAGATGGTGGATGTGGCACCCTC 300	
Db	340 TTITGCCCCGCTCTCTCTACAACTAAATGGGGTGTGCAATCCCHCCTC 399	
Qy	301 CAAACACTTGACAGGGCTGAGCCCTCTCTCAAAATGGCTCATACGGAGCTGTAC 360	
Db	400 CAACATTGATGTTAGCACACCTGCTTCTGGCAAATGGCTAATACAAACGGGTATC 459	
Qy	361 GTCCCCGTCCTTCGTGGTACCATGTATGAGAAAGGTGGTCACTG 420	
Db	460 GTCCCTGTATCTTTCGAAAGGTGGCTTATGAGAAAAGGAGGATAGGTTACAGTA 519	
Qy	421 AATGGCAGCTCATCTCAACCTGTTGATCACAAAGCTGGTGGCCAGGGAGCTC 480	
Db	520 AATGGCAGCTCATTTCACTTGTTTAGTGACAAATGGTGGAGTGTGGTGTATAT 579	
Qy	481 CACTCTGTGATGAAAGGGCTCGAACCTGGATGCAATGCACTGCTAGAAATGGGC 540	
Db	580 TCATCGATTTCAATTA-GGGTCTTATACATGGATGGCAGCAAGTCAAGAAATGGGC 638	
Qy	541 CAAACTGCAAAACAACTATCTCAATGGCCAGGGCTTCTCTTCAAGTCACTCTT 600	
Db	639 CAAATGGCAAAAGCAATCTAAATCTATGGTCAAGGCTTCATTCAGTCACCA 698	
Qy	601 AGTGTAG 608	
Db	699 AGTGTAGG 706	
RESULT	14	
AW584547	AW584547.1 GI:7261601	
LOCUS	N2106094 MHAM Medicago truncatula/Glomus versiforme mixed EST library CDNA clone MHAM-2F17, mRNA sequence.	
DEFINITION	695 bp mRNA linear EST 07-SEP-2000	
KEYWORD SOURCE	Medicago truncatula/Glomus versiforme mixed EST library	
ORGANISM	Eukaryota: mixed EST libraries.	
REFERENCE	(bases 1 to 695)	
AUTHORS	Harrison,M.J., Liu,J., Pang,H., Gonzales,M., Ellis,L., Town,C.D., Bowman,C.L., Craven,M.B., Hansen,T.S., Holt,I.E. and Fraser,C.M.	
TITLE	ESTs from roots of <i>Medicago truncatula</i> after colonization with <i>Glomus versiforme</i>	
JOURNAL	unpublished (2000)	
COMMENT	Contact: Harrison M.J. Plant Biology Division The Samuel Roberts Noble Foundation 2510 Sam Noble Parkway, Ardmore, OK 73401 Tel.: 580-223-5810 Fax: 580-221-7380	
FEATURES	Email: mharrison@noble.org Other name: MHAM-2C-09; Date: 3/14/00; Updated to the Database of Expressed Sequence Tags (dbEST) on 04/27/00; More information is available at ' <a href="http://chrisie.tamu.edu/medicago">http://chrisie.tamu.edu/medicago</a> '.	
source	Seq primer: T3.	
FEATURES	Location/Qualifiers	
source	1 .695	
Query Match	/organism="Medicago truncatula/Glomus versiforme" mixed EST library"	
Best Local Similarity 78.4%; Pred. No. 0; Mismatches 424; Conservative 0; Indels 0; Gaps 0;	/cultivar="Medicago truncatula genotype A17" <highlight>/db_xref</highlight>="taxon:119092" <highlight>/clone</highlight>="MHAM-2F17" <highlight>/tissue</highlight> "Roots" <highlight>/dev_stage</highlight> Roots harvested at 10, 17, 22, 31 and 38 days post-inoculation with Glomus versiforme. The library was made from a mixture of RNA from each of these stages. "Iab_host": E. coli strain XLOR" <highlight>/note</highlight>"Vector: pBluescript SK(-); Site_1: EcoRI; Site_2: XbaI; CDNA was prepared from polyA+ enriched RNA from roots harvested at 10, 17, 22, 31 and 38 days post-inoculation with Glomus versiforme. The cDNA was directionally ligated into the Unizap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda ZAP phage using EX-assist helper phage and propagated in XLOR cells."	
BASE COUNT	185 a 150 c 156 g 204 t	
ORIGIN		
Query Match	52.0%; Score 353.8; DB 9; Length 695;	
Best Local Similarity 78.4%; Pred. No. 0; Mismatches 117; Conservative 0; Indels 0; Gaps 0;	Query Match	52.0%; Score 353.8; DB 9; Length 695;
BASE COUNT	185 a 150 c 156 g 204 t	
ORIGIN		
Query Match	52.0%; Score 353.8; DB 9; Length 695;	
Best Local Similarity 78.4%; Pred. No. 0; Mismatches 117; Conservative 0; Indels 0; Gaps 0;	Query Match	52.0%; Score 353.8; DB 9; Length 695;
BASE COUNT	185 a 150 c 156 g 204 t	
ORIGIN		
Query	7 GGTGGAGCTGGTGGATGGAAATTATAGGCCAGGGATGGACGACATCGGCCACATG 66	
Db	155 GGTGGATGGAAATGCCATGCCACATTATGGTGGAGGATGCAATGGCAATG 214	
Qy	67 GGTGGAGCTGGTGGATGGAAATTATAGGCCAGGGATGGACGACATCGGCCAC 126	
Db	215 GGAGGGCTGGTGGTATGGATAGCCAAAGGCTATGGACCAACTGCTGCA 274	
Qy	127 CTGAGCACTGGCTATTAAAGATGGATAATGGTGGTGGTGGTGGAAATGACTGT 186	
Db	275 CTAGACACTGCTTTCATCAAAATGGATTGGTGGGGCTTGCTGAGATGAATGT 334	
Qy	187 ACAACAGACCTTAATGGTGCCTCCGGAACTTATGGGCACTGCCACACTTGTG 245	
Db	395 CCCAACATTGCGAGTCAATACCAATGGTGTGATGGTGTACTCTGCA 454	
Qy	335 AACAGTACCCATTAAATGGTGCCTCCGGTACATGGTGTACTCTGCA 394	
Qy	247 CCTCTTAACCTGGTGCCTCCCTAACACAATGGTGTGAGTGGCTTGCTGACAC 306	
Db	395 CCCAACATTGCGAGTCAATACCAATGGTGTGATGGTGTACTCTGCA 454	
Qy	307 TTGACATAGGCTGAGCTGCCTCTCTCAATCGCTAATCCGAGCTGGTATCGCCCC 366	





Copyright (c) 1993 - 2002 CompuGen Ltd.

GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: October 13, 2002, 18:25:39 ; Search time 80 Seconds  
(without alignments)

Scoring table: IDENTITY\_NUC

Sequence: Gapop 10.0 , Gapext 1.0

Searched: 383533 seqs, 122816752 residues

Total number of hits satisfying chosen parameters: 767066

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

**Database :**

- Issued\_Patents\_NA:\*
- 1: /cgn2\_6/podata/2/lna/5A\_\_COMB.seq:\*
- 2: /cgn2\_6/podata/2/lna/5B\_\_COMB.seq:\*
- 3: /cgn2\_6/podata/2/lna/6A\_\_COMB.seq:\*
- 4: /cgn2\_6/podata/2/lna/6B\_\_COMB.seq:\*
- 5: /cgn2\_6/podata/2/lna/PCTUS\_COMB.seq:\*
- 6: /cgn2\_6/podata/2/lna/backfiles1.seq:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

**SUMMARIES**

Result No.	Score	Query Match Length	DB ID	Description
1	681	100.0	681	2 US-08-440-517A-1
2	681	100.0	4	US-09-160-1
3	276.4	40.6	537	2 US-08-845-539-5
4	276.4	40.6	537	4 US-03-362-642-5
5	259.4	38.1	727	1 US-07-885-970A-6
6	259.4	38.1	727	1 US-08-298-687A-6
7	259.4	38.1	727	1 US-08-530-797-5
8	259.4	38.1	727	1 US-08-298-829-5
9	259.4	38.1	727	2 US-08-787-335-5
10	253.4	37.2	2415	1 US-07-885-970A-26
11	253.4	37.2	2415	1 US-08-298-687A-26
12	253.4	37.2	2415	1 US-08-845-539-1
13	251.6	36.9	702	4 US-08-298-829-26
14	251.6	36.9	702	2 US-08-845-539-1
15	242.8	35.7	501	2 US-08-845-539-3
16	242.8	35.7	501	4 US-09-362-642-3
17	31.8	4.7	1685	1 US-08-486-721A-1
18	31.8	4.7	7218	1 US-08-232-463-14
19	30.2	4.4	3771	1 US-07-876-280-5
20	30.2	4.4	3771	1 US-09-783-1
21	30.2	4.4	3771	1 US-08-158-322-5
22	30.2	4.4	3771	1 US-08-304-626-5
23	30.2	4.4	3771	1 US-08-316-301A-5
24	30.2	4.4	3771	1 US-08-611-128-5
25	30.2	4.4	3771	3 US-09-173-891-5
26	30.2	4.4	3771	4 US-09-137-137-5
27	30.2	4.4	3771	5 PCT-US92-03624-5

**RESULT 1**  
US-08-440-517A-1

Sequence 1, Application US/08440517A  
Patent No. 5959082

**GENERAL INFORMATION:**

APPLICANT: COSGROVE, DANIEL J. ;  
APPLICANT: SHERERAN, TATYANA;  
APPLICANT: SHI, JUN

TITLE OF INVENTION: PURIFIED EXPANSIN PROTEINS

NUMBER OF SEQUENCES: 6

CORRESPONDENCE ADDRESS:

ADDRESSEE: INTELLECTUAL PROPERTY OFFICE, THE  
STREET: 113 TECHNOLOGY CENTER  
CITY: UNIVERSITY PARK  
STATE: PENNSYLVANIA  
COUNTRY: UNITED STATES OF AMERICA  
ZIP: 16802-7000

**COMPUTER READABLE FORM:**

MEDIUM TYPE: FLOPPY DISK  
COMPUTER: NEC 286  
OPERATING SYSTEM: DOS  
SOFTWARE: WORDPERFECT 5.1

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08-440,517A

FILING DATE:

CLASSIFICATION: 530

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:  
LENGTH: 681

TYPE: NUCLEIC ACID  
STRANDEDNESS: SINGLE  
TOPOLOGY: UNKNOWN

SEQUENCE 1:  
US-08-440-517A-1

Query Match Best Local Similarity 100.0%; Score 681; DB 2; Length 681; Matches 681; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GACTACCGTGGCTGGCAGAGCGCCACGCCACCTTTATGGTGTGACCCATCTGGC 60  
Db 1 GACTACGGTGGCTGGCAGAGCGCCACCTTTATGGTGTGACCCATCTGGC 60

Qy 61 ACCATGGTGGACGTGTTGGGATATTACGCCAGGGTATGGCACACAGC 120  
Db 61 ACCATGGTGGACGTGTTGGGATATTACGCCAGGGTATGGCACACAGC 120

Qy 121 GTGGCGTGACCACTGCATTTAACATGATTAAGTGTGGCTTCGAATG 180  
Db 121 GTGGCGTGACCACTGCATTTAACATGATTAAGTGTGGCTTCGAATG 180

Sequence 1, Appli  
Sequence 2, Appli  
Sequence 3, Appli  
Sequence 4, Appli  
Sequence 5, Appli  
Sequence 6, Appli  
Sequence 7, Appli  
Sequence 8, Appli  
Sequence 9, Appli  
Sequence 10, Appli  
Sequence 11, Appli  
Sequence 12, Appli  
Sequence 13, Appli  
Sequence 14, Appli  
Sequence 15, Appli  
Sequence 16, Appli  
Sequence 17, Appli  
Sequence 18, Appli  
Sequence 19, Appli  
Sequence 20, Appli  
Sequence 21, Appli  
Sequence 22, Appli  
Sequence 23, Appli  
Sequence 24, Appli  
Sequence 25, Appli  
Sequence 26, Appli  
Sequence 27, Appli  
Sequence 28, Appli  
Sequence 29, Appli  
Sequence 30, Appli  
Sequence 31, Appli  
Sequence 32, Appli  
Sequence 33, Appli  
Sequence 34, Appli  
Sequence 35, Appli  
Sequence 36, Appli  
Sequence 37, Appli  
Sequence 38, Appli  
Sequence 39, Appli  
Sequence 40, Appli  
Sequence 41, Appli  
Sequence 42, Appli  
Sequence 43, Appli  
Sequence 44, Appli  
Sequence 45, Appli

**ALIGNMENTS**



APPLICATION NUMBER: US/08/845,539  
 FILING DATE: 25-APR-1997  
 CLASSIFICATION: 435  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Bastian, Kevin L.  
 REGISTRATION NUMBER: 34,774  
 REFERENCE/DOCKET NUMBER: 023070-078200US  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: (415) 576-0200  
 TELEFAX: (415) 576-0300  
 INFORMATION FOR SEQ ID NO: 5:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 537 base pairs  
 TYPE: nucleic acid  
 STRANDEDNESS: single  
 TOPOLOGY: linear  
 MOLECULE TYPE: DNA (genomic)  
 FEATURE:  
 NAME/KEY: CDS  
 LOCATION: 1..537  
 OTHER INFORMATION: /product= "melon CmEx1"  
 US-08-845-539-5

Query Match 40.6%; Score 276.4; DB 2; Length 537;  
 Best Local Similarity 71.4%; Pred. No. 5.9e-87; Mismatches 0; Indels 6; Gaps 1;  
 Matches 380; Conservative

Qy 26 AGCCACCTTTATGGGGTGTGACCCATGGCACCATGGGGAGCTGTGGTATG 85  
 Db 5 AGCCACGTTATGGGGTGTGACCCATGGCACCATGGGGAGCTGTGGTATG 64

Qy 86 GGATTATACAGCCAGGGATGGGACACAGCGGGCTGAGCACTGCCTATTA 145  
 Db 65 GCAATCTCTACAGCCAGGGCTATGGGGTGTGACCCATGGGGAGCTGTGGTATG 124

Qy 146 ACAATGGTAACTGGGGTGTGCTGGGAATRACTTGACAAACGACCTAATGGT 205  
 Db 125 ACAATGGCTCAGCTGTGCTGTGAGTCAGTGTGCTAATGACCCCTGATGGT 184

Qy 206 GCCTCCGGAA-----CTATAGGGTACTGCCAACATTGCCCCTCAACTTGTG 259  
 Db 185 GCAATCTCTACAGCCAGGGCTATGGGGTGTGCTGGGAACATGGGGTGTGCTTCTG 244

Qy 260 CTCTCCCTAACACAATGGGGTGTGACCCCTCTCCACACTCCGACATGGCTG 319  
 Db 245 CTCTCTTAATGACAATGGGGTGTGTAACCTTCTCGACTCATTTGACCCCGCTA 304

Qy 320 AGCCGCCCTCTCAAATGCTCAATCCGAGCTGTGTTGGCTCCCGCTCTTCTGTA 379  
 Db 305 TGCCATGTTCTCAAGAGCTGGCTGAGTACCGCCTGGACATGGACCTGGCT 364

Qy 380 GGGTACCATGTTGAGAAGGGTGGAGTGGTTACATCAATGCCCCCTCTTCTGTA 439  
 Db 365 GGGTCCATGTTGAGAACAGGGGATCAGGTTCACATCAACGGTTCCGGTACTTCA 424

Qy 440 ACCCTGTTGATCAACAGCTGGCTGGCGACGCTCCTGTCGATAAGG 499  
 Db 425 ATTTGGGTTAACACCAACGCTGGCGGGTCAAGGGATATGTTGAGGGTCAGCTAAAG 484

Qy 500 GGCTCTGAACTGGATGGCAATCCATGCTTAGAAATTGGGCCAACACTGGCA 551  
 Db 485 GATCAACACCGGTTGGATGAGCAAGGGGACATGGCTTCTGTTCTGTTACTTCA 536

---

RESULT 4  
 US-09-312-642-5  
 Sequence 5, Application US/09362642  
 Patent No. 635035  
 GENERAL INFORMATION:  
 APPLICANT: Bennett, Alan B.  
 APPLICANT: Rose, Jocelyn K.C.  
 APPLICANT: The Regents of the University of California  
 TITLE OF INVENTION: Fruit-specific and Ripening Regulation Expansin Genes

---

RESULT 5  
 US-07-885-970A-6  
 Sequence 6, Application US/07885970A  
 Patent No. 5495070  
 GENERAL INFORMATION:  
 APPLICANT: John, Malivakal E.  
 TITLE OF INVENTION: GENETICALLY ENGINEERING COTTON  
 NUMBER OF SEQUENCES: 33  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: Nicholas J. Seay, Quarles & Brady  
 STREET: P.O. Box 2113, First Wisconsin Plaza  
 CITY: Madison  
 STATE: Wisconsin  
 COUNTRY: USA  
 ZIP: 53701  
 COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: Microsoft Word

CURRENT APPLICATION DATA:  
 FILING DATE: 19920518  
 CLASSIFICATION: 435  
 PRIORITY APPLICATION NUMBER: US 07/885,970A  
 APPLICATION NUMBER: US 07/885,970A  
 FILING DATE: 04-OCT-1988  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Seay, Nicholas J.  
 REGISTRATION NUMBER: 27,386  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: (608) 283-2478  
 TELEFAX: (608) 251-5139  
 INFORMATION FOR SEQ ID NO: 6:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 727 base pairs  
 TYPE: NUCLEIC ACID  
 STRANDEDNESS: double  
 TOPOLOGY: linear  
 MOLECULE TYPE: cDNA  
 HYPOTHETICAL: NO  
 ANTI-SENSE: NO  
 ORIGINAL SOURCE:  
 ORGANISM: *Gossypium hirsutum*  
 STRAIN: Coker 312  
 DEVELOPMENTAL STAGE: 10 day old fiber cells  
 TISSUE TYPE: fiber cells  
 IMMEDIATE SOURCE:  
 LIBRARY: CKEB10  
 CLONE: B12  
 US-07-885-970A-6

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

RESULT 6  
 US-08-298-687A-6  
 ; Sequence 6, Application US/08298687A  
 ;  
 ; General Information:  
 ; Patent No. 5521078  
 ;  
 ; Applicant: John Maliyakal E.  
 ; Title of Invention: GENETICALLY ENGINEERING COTTON  
 ; Title of Invention: PLANTS FOR ALTERED FIBER  
 ; Number of Sequences: 33  
 ; Correspondence Address:  
 ; Addressee: Nicholas J. Seay, Quarles & Brady  
 ; Street: P.O. Box 2113, First Wisconsin Plaza  
 ; City: Madison  
 ; State: Wisconsin  
 ; Country: USA  
 ; ZIP: 53701

COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: Microsoft Word

CURRENT APPLICATION DATA:  
 FILING DATE: 21-NOV-1990  
 PRIORITY APPLICATION NUMBER: US/08/298, 687A  
 PRIORITY APPLICATION NUMBER: US 07/617, 239  
 FILING DATE: 04-OCT-1988  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Seay, Nicholas J.

REGISTRATION NUMBER: 27,386  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: (608) 283-2478  
 TELEFAX: (608) 251-5139  
 INFORMATION FOR SEQ ID NO: 6:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 727 base pairs  
 TYPE: nucleic acid  
 STRANDEDNESS: double  
 TOPOLOGY: linear  
 MOLECULE TYPE: cDNA  
 HYPOTHETICAL: NO  
 ANTI-SENSE: NO  
 ORIGINAL SOURCE:  
 ORGANISM: *Gossypium hirsutum*  
 STRAIN: Coker 312  
 DEVELOPMENTAL STAGE: 10 day old fiber cells  
 TISSUE TYPE: fiber cells  
 IMMEDIATE SOURCE:  
 LIBRARY: CKEB10  
 CLONE: B12  
 US-08-298-687A-6

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATTAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81;  
 Matches 335; Conservative 0; Mismatches 126; Indels 0; Gaps 0;  
 QY 220 ATAGGGTCACTGCCAACATTGCGCTCTTAACATTGCTTGCTTCCTAACACATGGT 279  
 1 ATAACCGTGACGCCAACACTTGTGCACCTAACATGCTTATCTAGTGAATGGC 60

421 GCTGGTGTGCAATTCCGACAACTTTGAGGAGGCCAGT 461  
 DB



FILING DATE: 21-NOV-1990  
 PRIORITY APPLICATION DATA:  
 APPLICATION NUMBER: US 07/253,243  
 FILING DATE: 04-OCT-1988  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Seay, Nicholas J.  
 REGISTRATION NUMBER: 27,386  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: (608) 283-4778  
 TELEFAX: (608) 221-5139  
 INFORMATION FOR SEQ ID NO: 6:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 727 base pairs  
 TYPE: nucleic acid  
 STRANDEDNESS: double  
 TOPOLOGY: linear  
 MOLECULE TYPE: cDNA  
 HYPOTHETICAL: NO  
 ANTI-SENSE: NO  
 ORIGINAL SOURCE:  
 ORGANISM: Gossypium hirsutum  
 STRAIN: Coker 312  
 DEVELOPMENTAL STAGE: 10 day old fiber cells  
 TISSUE TYPE: fiber cells  
 IMMEDIATE SOURCE:  
 LIBRARY: CKFB10  
 CLONE: B12  
 US-08-298-829-6

Query Match 38.1%; Score 259.4; DB 1; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81; Mismatches 0; Indels 0; Gaps 0;  
 Matches 335; Conservative 0; MisMatches 126; Del 0; Gaps 0;

QY 220 ATTAGGGTCACTGCCAACACTTGTCCCTCAACACTGCGACATGGCTAGCTGAGCCCTGCCTCTCAATGGT 279  
 Db 1 ATAACCGTGACGCCAACATTGTCACATGCGCATGG 60

QY 280 GGATGGGCAACCCCTCCTCAACACTGCGACATGGCTAGCTGAGCCCTGCCTCTCAATGGT 339  
 Db 61 GGTTGGGCAATCCCCAACGAGAACACTTGTGGCCGACCGCATCTTGGATA 120

QY 340 GCTCAATACCAGCTGCTGTTATGGTCCGGTCTTGTAGGTACCATGTTGAGAA 399  
 Db 121 GCGAATATCGAGCTGGATCTGGTCCGGTCTTGTAGGTACCATGTTGAGAA 180

QY 400 GGAGGAGTGGCTTACATCATGGCACCTGATTCACCTGTTGATGCAAC 459  
 Db 181 GGAGGATCAGATCACATGGTACATGGTACATGGTACAGAAC 240

QY 460 GTCGGTGGCGAGGGCAGTCCACTCTGTGCGATAAGGGCTCGAAGTGGGGCAA 519  
 Db 241 GTGGGAGGGCAGGGGATATAAGCTGAGTCAGTGTCCAGACAGGATGGCTA 300

QY 520 TCCATGTCAGATATGGGCCAACACTGGCAAAACACTATCTCAATGGCAAGGC 579  
 Db 301 CCTATGTCAGAAATGGGCCAACACTGGCAAGGATCTTAAGGCAAAAGC 360

QY 580 CTTCCTCTTCAAGTCACTCTAGTGTGGCCAGCTCACGCTATAATCTGTCT 639  
 Db 361 CTCTCTTAAAGTGACTGCCAGGCAATCACAGCCPACAATGTGCT 420

QY 640 TCCAATGGCAANTGGCCAACACTATGAAGGCCCTCAATT 680  
 Db 421 GTGGGTTGGCAATCGGACAACATTGAGGGCCAGT 461

RESULT 9  
 US-08-787-335-5  
 Sequence 5 Application US/08787335  
 Patient No. 5981834  
 GENERAL INFORMATION:  
 APPLICANT: John, Maliyakal E.  
 APPLICANT: Umbeck, Paul F.

APPLICANT: Brill, Winston J.  
 TITLE OF INVENTION: GENETICALLY ENGINEERED COTTON PLANTS  
 TITLE OF INVENTION: FOR ALTERED FIBER  
 NUMBER OF SEQUENCES: 18  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: Quarles and Brady  
 STREET: P.O. BOX 2113  
 STREET: FIRST WISCONSIN PLAZA  
 CITY: MADISON  
 STATE: WISCONSIN  
 COUNTRY: U.S.A.  
 ZIP: 53701  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Diskette - 3.50 inch, 800kb storage  
 COMPUTER: Apple Macintosh  
 OPERATING SYSTEM: Macintosh  
 SOFTWARE: Microsoft Word 4.0  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/08/787,335  
 FILING DATE:  
 PRIORITY APPLICATION DATA:  
 APPLICATION NUMBER: US 07/253,243  
 FILING DATE: 04-OCT-1988  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Nicholas J. Seay  
 REGISTRATION NUMBER: 27,386  
 REFERENCE/DOCKET NUMBER: 1122990245  
 INFORMATION FOR SEQ ID NO: 5:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 727 base pairs  
 HYPOTHETICAL: NO  
 ANTI-SENSE: NO  
 ORIGINAL SOURCE:  
 ORGANISM: Gossypium hirsutum  
 STRAIN: Coker 312  
 DEVELOPMENTAL STAGE: 10 day old fiber cells  
 TISSUE TYPE: fiber cells  
 IMMEDIATE SOURCE:  
 LIBRARY: CKFB10  
 CLONE: B12  
 US-08-787-335-5

Query Match 38.1%; Score 259.4; DB 2; Length 727;  
 Best Local Similarity 72.7%; Pred. No. 6.4e-81; Mismatches 0; Indels 0; Gaps 0;  
 Matches 335; Conservative 0; MisMatches 126; Del 0; Gaps 0;

QY 220 ATTAGGGTCACTGCCAACACTTGTCCCTCAACACTGCGACATGGCTAGCTGAGCCCTGCCTCTCAATGGT 279  
 Db 1 ATAACCGTGACGCCAACATTGTCACATGCGCATGG 60

QY 280 GGATGGGCAACCCCTCCTCAACACTGCGACATGGCTAGCTGAGCCCTGCCTCTCAATGGT 339  
 Db 61 GGTTGGGCAATCCCCAACGAGAACACTTGTGGCCGACCGCATCTTGGATA 120

QY 340 GTCACATGGCGAGCTGGTCTTGTAGGTACCATGTTGAGAA 399  
 Db 121 GCGAATATCGAGCTGGATCTGGTCCGGTCTTGTAGGTACATGGAGAA 180

QY 400 GGAGGAGTGGCTTACATCATGGCACCTGATTCACCTGTTGATGCAAC 459  
 Db 181 GGAGGATCAGATCACATGGTACATGGTACATGGTACAGAAC 240

QY 460 GTCGGTGGCGAGGGCAGTCCACTCTGTGCGATAAGGGCTCGAAGTGGGGCAA 519  
 Db 241 GTGGGAGGGCAGGGGATATAAGCTGAGTCAGTGTCCAGACAGGATGGCTA 300

QY 520 TCCATGTCCTAGAACATTGGGCCAANACCTGGCAAGCAACACTAACATGGCCAGGC 579  
Db 301 CCTCTCTCCAGAAATTGGGCCAAACTGGCAGCAATGCTTACCTTAACGGACAAAGC 360  
QY 580 CTTCTCTTCAGTCACTCTTAGTGTATGGCTCGCACTCTCACTGCTATACTCGTCTC 639  
Db 361 CTCTCTTAAAGTGACTGCCAGGATGGCAGACTATCACGCTACATGTTAGTGCTC 420  
QY 640 TCCATGGCAATTGGCCAAACCTATGAGGCCCTCAATT 680  
Db 421 GCTGGTGGCAATTGGCACACTTTGAGGGCCAGT 461

RESULT 10  
US-07-885-970A-26  
; Sequence 26, Application US/07885970A  
; Patent No. 5,95070  
; GENERAL INFORMATION:  
; APPLICANT: John, Mallyakal E.  
; TITLE OF INVENTION: GENETICALLY ENGINEERING COTTON  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Nicholas J. Say, Quarles & Brady  
; STREET: P.O. Box 2113, First Wisconsin Plaza  
; CITY: Madison  
; STATE: Wisconsin  
; COUNTRY: USA  
; ZIP: 53701

COMPUTER READABLE FORM:  
; COMPUTER TYPE: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Microsoft Word

CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/07/885, 970A  
; FILING DATE: 1990-05-18  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/617, 239  
; FILING DATE: 21-NOV-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/253, 243  
; FILING DATE: 04-OCT-1988  
; ATTORNEY / AGENT INFORMATION:  
; NAME: Seay, Nicholas J.  
; REGISTRATION NUMBER: 27,386  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (608) 283-2478  
; FAX: (608) 251-5139  
; INFORMATION FOR SEQ ID NO: 26:  
; SBQUENCE CHARACTERISTICS:  
; LENGTH: 2415 base pairs  
; TYPE: NUCLEIC ACID  
; STRANDEDNESS: double  
; TOPOLOGY: linear  
; MOLECULE TYPE: DNA (genomic)  
; HYPOTHETICAL: NO  
; ANTI-SENSE: NO  
; ORIGINAL SOURCE:  
; ORGANISM: Goosypium barbadense  
; STRAIN: Sea Island  
; IMMEDIATE SOURCE:  
; LIBRARY: SIB12  
; CLONE: SIB12  
; US-07-885-970A-26

Query Match Score 253.4; DB 1; Length 2415;  
Best Local Similarity 64.6%; Pred. No. 1, 6e-78;  
Matches 453; Conservative 0; Mismatches 171; Indels 77; Gaps 2;

QY 57 TGGCACCATTGGTGGACTCTGGCTATGCCAATTATACAGCCAAAGGGATGCCACGAA 116  
Db 976 TGTTCATAGGGGAACCTTGTGTTATGAAACCTGTACAGTCAAGGTTATGAAACGAG 1035

QY 117 CACGGTGGCGTGAGCACTGGCTATTAGCATGGATAAGTGGTGTGGTGC-TTGCTTC 175  
Db 1036 CACAGCAGCTTGTAGCACTGCACCTTCAACATGGCTTGAGCTGGTGCACCTCTACG 1095  
QY 176 AATGACTGTGCAAAAGGCCAAATTGGTGCCTTCCGGAACTATAGGCTCACTGCCA 235  
Db 1096 AGCTCCGGTGCACAAATGATCCTCAATGGTGCATTAGTCGACCATTAACCTGACGCCA 1155  
QY 236 CCAACTTTGGCTCTTAACTGTGCTCCATACACACATGGTGCATGGCAGACCCTC 295  
Db 1156 CCACATTGTCCTTAACTGTGCTTAACTGTGCTTAACTGTGACATGGCAGGGTGGCAATGCC 1215

QY 296 CTCTCCAAACACTCGACATGCTGAGCCTGCCTCCATGCTCAATACCGAGCTG 355  
Db 1216 CACGAGAACCTTTGATGGCGAACGGATTCTTGCAAGATCGGGAAATCAGCT 1275

QY 356 GTACGCTCCCG----- 367

Db 1336 TTAAAGGTATGTTAACCTGTGGTTAACCTGATGAGGTTAGTGTGAGAAA 1395

QY 400 GGTOGGAGTGAGGTTACATCATGGCCACATCTCACTCGTTGATCACAC 459  
Db 1395 GGAGGCATCAGGTACACCATGATGGACATGCTACTCAGATGGTGTATAACCAAC 1455

QY 460 GTGGTGGCGCAGCGAGCTCCACTCTGTTGATAAAGGSGTCTCGAAGCTGATGGCAA 519  
Db 1456 GTGGGAGGGCAGGGATATAAGTCAGTGTCCATCAAGTGTGTTCCAAACAGGATGCTA 1515

QY 520 TCCATGTCATGAAATTGGCCAAACCTGGCAAGCAACACTATCAGTGGCAGGC 579  
Db 1516 CCTATGTCAGAAATTGGCCAAACACTGAGCAATGTCAGTGTGAGGAAAGC 1575

QY 580 CTTCTCTTCAGTCACTCTTAGTGTATGGCTCGCACTCTCACGCTATAACTCGTCTC 639  
Db 1576 CTCTCTTAAAGTGACTGCCAGGATGGCAGACTATCACAAACTACATGTTAGTGCTC 1635

QY 640 TCCATGGCAATTGGCCAAACCTATGAGGCCCTCAATT 680  
Db 1636 GCTGGTGGCAATTGGCACAAACTTTGAGGGGCCAGT 1676

RESULT 11  
US-08-290-687A-26  
; Sequence 26, Application US/08298687A  
; Patent No. 5,921078  
; GENERAL INFORMATION:  
; APPLICANT: John, Mallyakal E.  
; TITLE OF INVENTION: GENETICALLY ENGINEERING COTTON  
; TITLE OF INVENTION: PLANTS FOR ALTERED FIBER  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Nicholas J. Say, Quarles & Brady  
; STREET: P.O. Box 2113, First Wisconsin Plaza  
; CITY: Madison  
; STATE: Wisconsin  
; COUNTRY: USA  
; ZIP: 53701

COMPUTER READABLE FORM:  
; COMPUTER TYPE: Floppy disk  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Microsoft Word  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/298, 687A  
; FILING DATE:  
; CLASSIFICATION: 800  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/617, 239



REFERENCE/DOCKET NUMBER: 023070-078200US  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: (415) 576-0200  
 TELEFAX: (415) 576-0300  
 INFORMATION FOR SEQ ID NO: 1:  
 INFORMATION FOR SEQ ID NO: 1:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 702 base pairs  
 TYPE: nucleic acid  
 STRANDEDNESS: single  
 TOPOLOGY: linear  
 MOLECULE TYPE: DNA (genomic)  
 NAME/KEY: CDS  
 LOCATION: 28..702  
 OTHER INFORMATION: /product= "tomato LeEx1"  
 ; US-08-845-539-1  
 Query Match 36.9%; Score 251.6; DB 2; Length 702;  
 Best Local Similarity 67.2%; Pred. No. 3.4e-78; Mismatches 179; Indels 12; Gaps 2;  
 Matches 391; Conservative 0; ;  
 QY 7 GGTGGCTGGAGAGCCGACCCATTATGGTGGTGCACGATCAGCACATGCCAGTCACATGGTGTGATACAC 1335  
 Db 1336 TTAAAGGTAACTGTTAACCTGTTACCTTGCAAGGGTCTCATGTGTGAGAAA 399  
 Qy 400 GGTGGAGTGGGTTACAACATGCCACATACATTCACCTGTTACATGGTGTGATACAC 459  
 Db 1396 GGAGGCATCAGTACACCATGAATGGACATTCGTACTTCACATGGTGTGATACAC 1455  
 Qy 460 GTCGGTGGCGAGGCGACGTCACACTGTGTCATAAAGGGGTCTCGAAGCTGGATGCCA 519  
 Db 1456 CTGGGAGGGGGATATACCTCAGTGGTCCATCAAGTTCACAAAGAGGAGGCGTA 1515  
 Qy 520 TCCATGTCAGTAAATGGGCGCAAACATGCCAAAGGACAACTCTCAAGGGCG 579  
 Db 1516 CCTATGTCAGAATGGGCGCAAACATGCCAGGATCTTACCTAACGGCCAAGC 1575  
 Qy 580 CTTCCTCTCAAGTCACCTTGTGATGGTGCACCTCTCAGTGCCTATAATCTGTCTC 639  
 Db 1576 CTCCTCTCAAGTCACCTTGTGATGGTGCACCTCTCAGTGCCTATAATCTGTCTC 1635  
 Qy 640 TCCAATGGCAATTGGCCAAACCTATGAGGCCCTCAATT 680  
 Db 1636 GCTGGTGGCAATTGGCAAACTTGTGAGGAGGCGATT 1676  
 RESULT 13  
 US-08-845-539-1  
 Sequence 1, Application US/08845539  
 Patent No. 5920303  
 GENERAL INFORMATION:  
 APPLICANT: Bennett, Alan B.  
 APPLICANT: Rose, Jocelyn K.C.  
 TITLE OF INVENTION: Fruit-Specific and Ripening-Regulation  
 NUMBER OF SEQUENCES: 8  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: Townsend and Townsend and Crew LLP  
 STREET: Two Embarcadero Center, Eighth Floor  
 CITY: San Francisco  
 STATE: California  
 COUNTRY: USA  
 ZIP: 94111-3834  
 COMPUTER READABLE FORM:  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: PatentIn Release #1.0, version #1.3.0  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/08/845,539  
 FILING DATE: 25-APR-1997  
 CLASSIFICATION: 435  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Basian, Kevin L.  
 REGISTRATION NUMBER: 34,774  
 RESULT 14  
 US-09-362-642-1  
 Sequence 1, Application US/09362642  
 Patent No. 6350935  
 GENERAL INFORMATION:  
 APPLICANT: Bennett, Alan B.  
 APPLICANT: Rose, Jocelyn K.C.  
 APPLICANT: The Regents of the University of California  
 TITLE OF INVENTION: Fruit-Specific and Ripening Regulation Expansin Genes  
 FILE REFERENCE: 023070-078210US

CURRENT APPLICATION NUMBER: US/09/362,642  
 CURRENT FILING DATE: 1999-07-27  
 NUMBER OF SEQ ID NOS: 8  
 SOFTWARE: PatentIn Ver. 2.1  
 SEQ ID NO: 1  
 LENGTH: 702  
 TYPE: DNA  
 ORGANISM: *Lycopersicon esculentum* cv. "T5  
 FEATURE:  
 NAME/KEY: CDS  
 LOCATION: (28)..(702)  
 OTHER INFORMATION: tomato expansin (LeRx1)  
 US-09-362-642-1

Query Match 36.9%; Score 251.6; DB 4; Length 702;  
 Best Local Similarity 67.2%; Pred. No. 3.4e-78; Matches 391; Conservative 0; Mismatches 179; Indels 12; Gaps 2;

QY 7 GGCGCTGCAGAGGGCCACGCCACGCACTTTAGGGTGGTGGTGGCAGCATCGCACATG 66  
 Db 118 GGTCATGGAAACTGCACATGCTACATTAGGGGAAGTGATGCTTCAGAACATG 177  
 QY 67 GGCGAGCTGTGGTATGGAAATTACAGCCAAGGTATGCCACACGGTGGCG 126  
 Db 178 GGCGTGGCTGTGGTATGGAAATTACAGCCAAGGTACAGGAGTAACAGGAGCA 237  
 QY 127 CTGAGCACTGCGTATTACAATGGGATAAGTGTGCTGCTGCTGGAATGACTGT 186  
 Db 238 CTAGTACTGCTGTGGTACATGGTTAAGTGTGAGCTGTTGACTTAATGT 297  
 QY 187 ACCAACAGGCCCT-----AAATGGCTTCGGGAA-----CTATTAGGGTACTGCC 234  
 Db 298 ACCAAATCTCTATTGGAAATGGTGTCTCCGGAAACCTTCCATTATCACAGT 357  
 QY 235 ACCAACTTGTGCTCTTAACCTTGCTCTTACACAACTGGTGTGTTGCAACCT 294  
 Db 358 ACCATTCTGCCCCACAAATTAGCCGTGCAATGACATGGCTGGCTGGTAAACCT 417  
 QY 295 CCTCTCCAAACACTCGACATGGGTGAGCTGCTCTCTCAATCAGCTCAATCCAGCT 354  
 Db 418 CCTCGCCCTACTCTGACTCTGCTTAATGCTCAATGCTCAACTTGCTCAACCTGCT 477  
 QY 355 GGATGCGCCCGCTCTGGTGTAGGTTACATGATGAGAAGGGAGGTGGAGTT 414  
 Db 478 GGATGTTGTCCTGTAACCTATGCGAGGATCCATGCGCAAGCAAGGAGGATCAGTT 537  
 QY 415 ACATCAATGGCCACTCATACTTCACCTCGTTGATCACAAACCCTGGGGCGAGC 474  
 Db 538 ACCATCATGGATTCGGTACTCTCACTTAGTGTGTGATGAGGTGGAGGG 597  
 QY 475 GAGTCCTACTCTGTGATGAAAGGGCTCTGCAACTTGATGCCAATCCATGCTGAAT 534  
 Db 598 GATATTATAAGGTTGGTAAAGGACAACAAAGCAACATGGTGTGAGCCGTTAAT 657  
 QY 535 TGGGCCAAATGGCAAGAACACATATCCTAACGCCA 576  
 Db 658 TGGGACAAATTGGCAATCAATGGCTTGTACTGTCAA 699

RESULT 15  
 US-08-845-539-3  
 Sequence 3. Application US/08845539  
 Patent No. 592303  
 GENERAL INFORMATION:  
 APPLICANT: Bennett, Alan B.  
 APPLICANT: Rose, Jocelyn K.C.  
 TITLE OF INVENTION: Fruit-Specific and Ripening Regulation  
 NUMBER OF SEQUENCES: 8  
 CORRESPONDENCE ADDRESS:  
 STREET: Two Embarcadero Center, Eighth Floor  
 CITY: San Francisco

STATE: California  
 COUNTRY: USA  
 ZIP: 94111-3834  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: PatentIn Release #1.0, Version #1.1.30  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/08/645,539  
 FILING DATE: 25-APR-1997  
 CLASSIFICATION: 435  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Bastian, Kevin L.  
 REGISTRATION NUMBER: 34,774  
 REFERENCE/DOCKET NUMBER: 023070-078200US  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: (415) 576-0200  
 TELEX/FAX: (415) 576-0300  
 INFORMATION FOR SEQ ID NO: 3:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 501 base pairs  
 TYPE: nucleic acid  
 STRANDEDNESS: single  
 TOPOLOGY: linear  
 MOLECULE TYPE: DNA (genomic)  
 FEATURE:  
 NAME/KEY: CDS  
 LOCATION: 1..501  
 OTHER INFORMATION: /product= "strawberry FaEx1"  
 US-08-845-539-3

Query Match 35.7%; Score 242.8; DB 2; Length 501;  
 Best Local Similarity 69.4%; Pred. No. 3.3e-75; Matches 347; Conservative 0; Mismatches 147; Indels 6; Gaps 1;

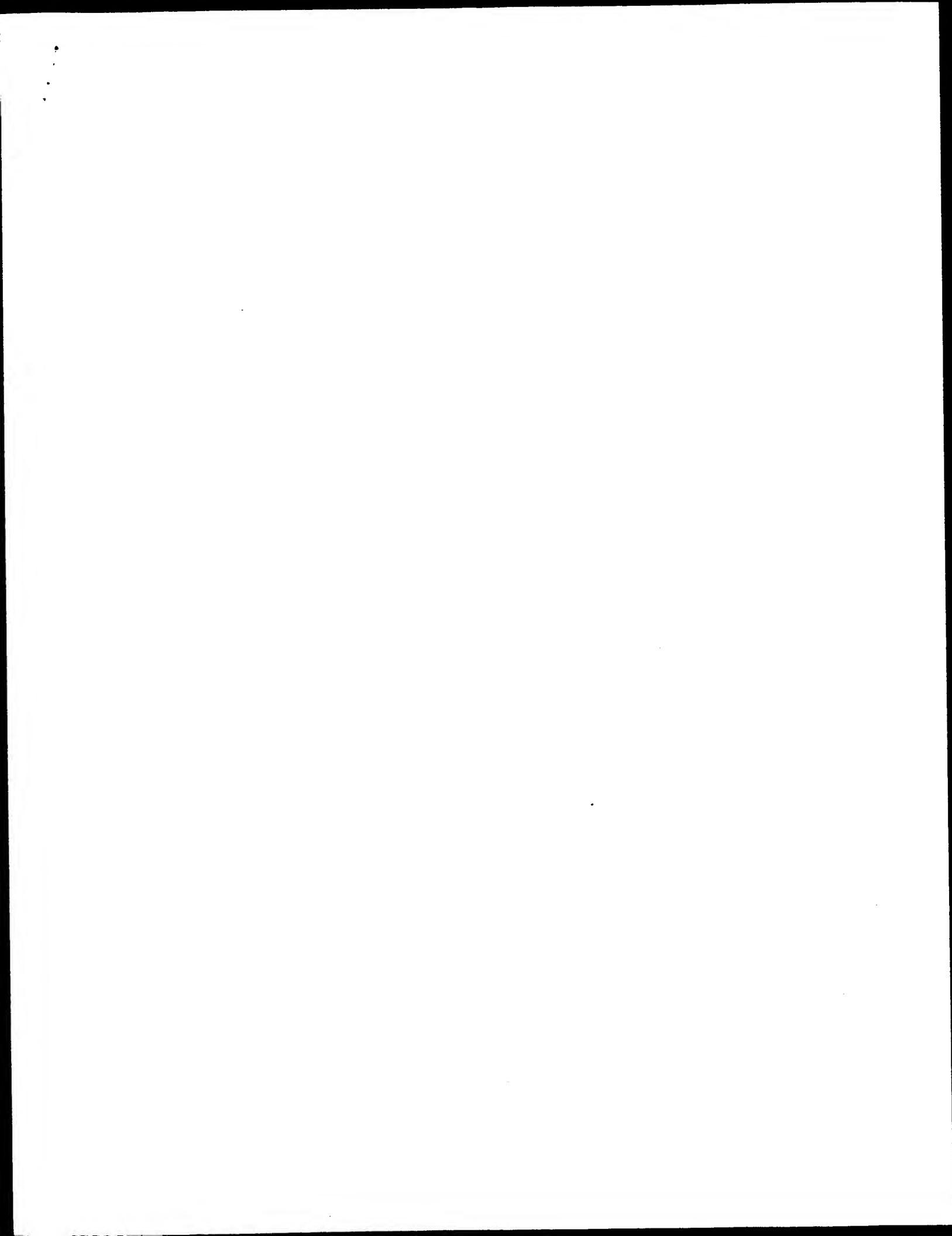
QY 58 GGACCATGGGGAGCTTGTTGGGATGGAAATTATGGCCAGGGTATGCCACAGAC 117  
 Db 1 GGAACTATGGGGGGCTCTGGTGTGGATGGAAACCTACAGCCAGGGCTACGGAGTCAC 60  
 QY 118 ACGGTGGCGTGGAGCTGCGCTATTAACCATGGATGAGTGTGGTGTGCTGCAA 177  
 Db 61 ACTGCTGGCTGAGCACGGCTCTGTTCAACAAATGGCTGAGCTGGGGCTTGTTGGAG 120  
 QY 178 ATGACTGTGACAAGGACCTTAATGGTGTCTGGGAA-----CTATTAGGGTACT 231  
 Db 121 ATCAAGTGGCGAGGCCAACGGGGTCACTGGCGGAAAGCCCTCCATTTCGTCAAC 180  
 QY 232 GCCACCAACTTGTGCTCTAACATGCTGCTCTCTAACACATGGTGTGAGTGTGAC 291  
 Db 181 GCCACCAACTCTGCTCTCCAACTTCGCTCAGGCCAGGGACATGGGGTTGGTGCAC 240  
 QY 292 CCTCTCTCCAAACACTTCGCACTGCTGCTGGCTGCTCTCTCAATGCTCAATACCGA 351  
 Db 241 CCTCGGGGACCACTTGGACTCTGGCTGCTGGCTGCTCTCTCAATGCTCAATACCGA 300  
 QY 352 GCTGTATGCCGCTCTGGTACCATGTTGAGAAGGGTGGAGTGG 411  
 Db 301 GCGGGATCCCTCCGGTCTCTGGTACCATGCTGCTGGCTGCTGG 360  
 QY 412 TTAAATCATGGCCACTCATCTCACTCACTCTGGTACCATGCTGCTGGGCA 471  
 Db 361 TTCAACATTCAGGGCACAGTACTCTCAACTCTGGTCTGCTGATCACCAACGGTGGGGGCA 420  
 QY 472 GGCAGGTCACTCTGTGCGATAAGGGCTCTGCAACTGAGGGCAATTCATGCTAGA 531  
 Db 421 GGGWATCTGTGAGCTGAGGTAAGGGACCAACACGGGGTGGCAATGAGGCCA 480  
 QY 532 AATGGGCCAAACTGGCA 551  
 Db 481 AATGGGGTCAACTGGCA 500

Tue Oct 15 18:05:21 2002

us-09-896-301-1.rni

Page 11

Search completed: October 13, 2002, 23:35:25  
Job time : 90 secs



GenCore version 5.1.3  
Copyright (c) 1993 - 2002 Compugen Ltd.

## Om nucleic - nucleic search, using sw model

Run on: October 13, 2002, 18:25:39 ; Search time 244 Seconds

4791.880 Million cell updates/sec

Title: US-09-896-301-1

Perfect score: 681

Sequence: 1 gactacgggtggcagag . . . . . cctatgaaaggcccaattc 681

Scoring table: IDENTITY\_NUC

Gapop 10.0 , Gapext 1.0

Searched: 1736436 seqs, 858457221 residues

Total number of hits satisfying chosen parameters:

3472872

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database :

N\_Genesec\_03802:\*

1: /SIDS1/gcdata/geneseq/geneseq/geneseq-emb1/NA1981.DAT:\*

2: /SIDS1/gcdata/geneseq/geneseq/geneseq-emb1/NA1982.DAT:\*

3: /SIDS1/gcdata/geneseq/geneseq/geneseq-emb1/NA1983.DAT:\*

4: /SIDS1/gcdata/geneseq/geneseq/geneseq-emb1/NA1984.DAT:\*

5: /SIDS1/gcdata/geneseq/geneseq/geneseq-emb1/NA1985.DAT:\*

6: /SIDS1/gcdata/geneseq/geneseq/geneseq-emb1/NA1986.DAT:\*

7: /SIDS1/gcdata/geneseq/geneseq/geneseq-emb1/NA1987.DAT:\*

8: /SIDS1/gcdata/geneseq/geneseq/geneseq-emb1/NA1988.DAT:\*

9: /SIDS1/gcdata/geneseq/geneseq/geneseq-emb1/NA1989.DAT:\*

10: /SIDS1/gcdata/geneseq/geneseq/geneseq-emb1/NA1990.DAT:\*

11: /SIDS1/gcdata/geneseq/geneseq-emb1/NA1991.DAT:\*

12: /SIDS1/gcdata/geneseq/geneseq-emb1/NA1992.DAT:\*

13: /SIDS1/gcdata/geneseq/geneseq-emb1/NA1993.DAT:\*

14: /SIDS1/gcdata/geneseq/geneseq-emb1/NA1994.DAT:\*

15: /SIDS1/gcdata/geneseq/geneseq-emb1/NA1995.DAT:\*

16: /SIDS1/gcdata/geneseq/geneseq-emb1/NA1996.DAT:\*

17: /SIDS1/gcdata/geneseq/geneseq-emb1/NA1997.DAT:\*

18: /SIDS1/gcdata/geneseq/geneseq-emb1/NA1998.DAT:\*

19: /SIDS1/gcdata/geneseq/geneseq-emb1/NA1999.DAT:\*

20: /SIDS1/gcdata/geneseq/geneseq-emb1/NA2000A.DAT:\*

22: /SIDS1/gcdata/geneseq/geneseq-emb1/NA2001A.DAT:\*

23: /SIDS1/gcdata/geneseq/geneseq-emb1/NA2001B.DAT:\*

24: /SIDS1/gcdata/geneseq/geneseq-emb1/NA2002.DAT:\*

## ALIGNMENTS

	RESULT 1		
ID	AAT13320	standard: DNA; 681 BP.	XX
XX			AC
AC	AAT13320;		XX
XX			DT
DT	08-JUL-1996 (first entry)		XX
XX			DE
DE	Cucumber expansin-29 cDNA.		XX
XX			KW
KW	Expansin-29; plant cell wall; cellulose; paper recycling; de-inking;		XX
XX			KW
KW	Poly saccharide; cucumber; ss.		OS
OS	Cucumis sativus var. Burpee Pickler.		XX
XX			PN
PN	AU9540262-A.		XX
XX			PD
PD	04-ARR-1996.		XX
XX			PF
PF	12-MAY-1994; 94AU-0068320.		XX
PR	12-MAY-1995; 95US-0440517.		PR
PR	12-MAY-1993; 93US-0060944.		XX
PA	(PENN-) PENN STATE RES FOUND.		XX
PI	Cosgrove DJ, McQueen-Mason S;		XX
DR	WPI: 1996-201150/21.		DR
DR	P-PSB; AAR94527.		XX
PT	Expansin proteins which alter the mechanical strength of		PT

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Length	DB ID	Description
1	681	100.0	681	Cucumber expansin-
2	392.8	57.7	1015	Arabidopsis thaliana
3	392.8	57.7	1016	Arabidopsis thaliana
4	377.6	55.4	AAC40777	Arabidopsis thaliana
5	377.6	55.4	AAC50628	Arabidopsis thaliana
6	377.6	55.4	1198	Arabidopsis thaliana
7	366.6	53.8	1233	Arabidopsis thaliana
8	358.6	52.7	1234	Arabidopsis thaliana
9	353.8	52.0	1326	Arabidopsis thaliana
			21	AAC47530

PT	poly:saccharide(s)	- useful in paper mfr. and recycling
XX		
PS	Disclosure; Page 30;	60pp; English.
XX		
CC	A cDNA clone (AT13320) codes for cucumber expansin-29 (AAK94527), a member of a novel class of proteins that catalyse the extension of plant cell walls and the weakening of the hydrogen bonds in pure cellulose. It was obtnd. by PCR amplification of cucumber seedling cDNA using primers based on isolated peptide fragments of the protein.	
CC	The gene can be expressed in bacterial or other systems for use in recombinant expansin prodn. Expression of the gene in transgenic plants may allow alteration of plant growth characteristics, while expression in plant tissue cultures may allow improved prodn.	
CC	CC	CC
CC	CC	CC
CC	CC	CC
XX	sequence 681 BP; 161 A; 179 C; 164 G; 177 T; 0 other;	
SQ		
Query Match	100.0%	Score 681; DB 17; Length 681;
Matches	681; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	
PF		
XX		
PR	25-FEB-2000; 2000EP-0301439.	
XX		
AC	AAC48712;	
XX		
DE	Arabidopsis thaliana DNA fragment SEQ ID NO: 58484.	
XX		
KW	Hybridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.	
KW		
XX		
OS	Arabidopsis thaliana.	
XX		
PN	EP1033405-A2.	
XX		
PD	06-SEP-2000.	
XX		
PR	25-FEB-2000; 990US-0121025.	
PR	05-MAR-1999; 990US-0123180.	
PR	09-MAR-1999; 990US-013548.	
PR	23-MAR-1999; 990US-0125788.	
PR	25-MAR-1999; 990US-0126764.	
PR	29-MAR-1999; 990US-0126785.	
PR	01-APR-1999; 990US-0127462.	
PR	06-APR-1999; 990US-0128334.	
PR	08-APR-1999; 990US-0128714.	
PR	16-APR-1999; 990US-012945.	
PR	19-APR-1999; 990US-0130077.	
PR	21-APR-1999; 990US-0130449.	
PR	23-APR-1999; 990US-0130810.	
PR	23-APR-1999; 990US-0131449.	
PR	28-APR-1999; 990US-013248.	
PR	30-APR-1999; 990US-0132487.	
PR	30-APR-1999; 990US-0132407.	
PR	04-MAY-1999; 990US-0132884.	
PR	05-MAY-1999; 990US-0132885.	
PR	06-MAY-1999; 990US-0132886.	
PR	06-MAY-1999; 990US-0132887.	
PR	07-MAY-1999; 990US-0132863.	
PR	11-MAY-1999; 990US-0134556.	
PR	14-MAY-1999; 990US-0134118.	
PR	14-MAY-1999; 990US-0134219.	
PR	14-MAY-1999; 990US-0134221.	
PR	14-MAY-1999; 990US-0134270.	
PR	18-MAY-1999; 990US-0134768.	
PR	19-MAY-1999; 990US-0134941.	
PR	20-MAY-1999; 990US-0135224.	
PR	21-MAY-1999; 990US-0135353.	
PR	24-MAY-1999; 990US-0135629.	
PR	25-MAY-1999; 990US-0136021.	
PR	27-MAY-1999; 990US-0136392.	
PR	28-MAY-1999; 990US-0136782.	
PR	01-JUN-1999; 990US-0137222.	
PR	03-JUN-1999; 990US-0137528.	
PR	04-JUN-1999; 990US-0137502.	
PR	07-JUN-1999; 990US-0137724.	
PR	08-JUN-1999; 990US-0138094.	
PR	10-JUN-1999; 990US-0138540.	
PR	10-JUN-1999; 990US-0138847.	
PR	14-JUN-1999; 990US-0139119.	
PR	16-JUN-1999; 990US-0139452.	
PR	16-JUN-1999; 990US-0139453.	
PR	16-JUN-1999; 990US-0139492.	
PR	17-JUN-1999; 990US-0139454.	
PR	18-JUN-1999; 990US-0139455.	
PR	18-JUN-1999; 990US-0139456.	
PR	18-JUN-1999; 990US-0139457.	
PR	18-JUN-1999; 990US-0139458.	
PR	18-JUN-1999; 990US-0139459.	
PR	18-JUN-1999; 990US-0139460.	
PR	18-JUN-1999; 990US-0139461.	
RESULT 2		
AAC48712		
AAC48712 standard; DNA; 1015 BP.		

PR 18-JUN-1999; 99US-0139463. PR 25-AUG-1999; 99US-0150566.  
 PR 18-JUN-1999; 99US-0139463. PR 26-AUG-1999; 99US-0150884.  
 PR 18-JUN-1999; 99US-0139750. PR 27-AUG-1999; 99US-0150665.  
 PR 21-JUN-1999; 99US-0139817. PR 27-AUG-1999; 99US-0150880.  
 PR 22-JUN-1999; 99US-0139899. PR 30-AUG-1999; 99US-0151303.  
 PR 23-JUN-1999; 99US-0140354. PR 31-AUG-1999; 99US-0151438.  
 PR 24-JUN-1999; 99US-0140695. PR 01-SEP-1999; 99US-0151930.  
 PR 28-JUN-1999; 99US-0140821. PR 07-SEP-1999; 99US-0152363.  
 PR 29-JUN-1999; 99US-0140991. PR 10-SEP-1999; 99US-0153070.  
 PR 30-JUN-1999; 99US-014287. PR 13-SEP-1999; 99US-0153758.  
 PR 01-JUL-1999; 99US-0141842. PR 15-SEP-1999; 99US-0154018.  
 PR 01-JUL-1999; 99US-0142154. PR 16-SEP-1999; 99US-0154039.  
 PR 02-JUL-1999; 99US-0142055. PR 20-SEP-1999; 99US-0154779.  
 PR 06-JUL-1999; 99US-014290. PR 22-SEP-1999; 99US-0155139.  
 PR 08-JUL-1999; 99US-0142803. PR 23-SEP-1999; 99US-0155486.  
 PR 02-JUL-1999; 99US-0142920. PR 15-SEP-1999; 99US-0155659.  
 PR 12-JUL-1999; 99US-0142977. PR 16-SEP-1999; 99US-0156158.  
 PR 13-JUL-1999; 99US-0143542. PR 20-SEP-1999; 99US-0156596.  
 PR 14-JUL-1999; 99US-0143624. PR 22-SEP-1999; 99US-0157117.  
 PR 15-JUL-1999; 99US-0144005. PR 23-SEP-1999; 99US-0157117.  
 PR 16-JUL-1999; 99US-0144085. PR 05-OCT-1999; 99US-0157753.  
 PR 08-JUL-1999; 99US-0144283. PR 06-OCT-1999; 99US-0157865.  
 PR 11-JUL-1999; 99US-0144286. PR 07-OCT-1999; 99US-0158029.  
 PR 12-JUL-1999; 99US-0144325. PR 24-SEP-1999; 99US-0158232.  
 PR 19-JUL-1999; 99US-0144331. PR 29-SEP-1999; 99US-0158568.  
 PR 19-JUL-1999; 99US-0144332. PR 04-OCT-1999; 99US-0158596.  
 PR 19-JUL-1999; 99US-0144333. PR 13-OCT-1999; 99US-0158638.  
 PR 19-JUL-1999; 99US-0144334. PR 13-OCT-1999; 99US-015865.  
 PR 19-JUL-1999; 99US-0144335. PR 14-OCT-1999; 99US-0158665.  
 PR 19-JUL-1999; 99US-0144336. PR 07-OCT-1999; 99US-0158665.  
 PR 20-JUL-1999; 99US-0144352. PR 08-OCT-1999; 99US-0158665.  
 PR 20-JUL-1999; 99US-0144352. PR 12-OCT-1999; 99US-0158665.  
 PR 20-JUL-1999; 99US-0144884. PR 13-OCT-1999; 99US-0158665.  
 PR 21-JUL-1999; 99US-0144884. PR 14-OCT-1999; 99US-0158665.  
 PR 21-JUL-1999; 99US-0145086. PR 18-OCT-1999; 99US-0158665.  
 PR 21-JUL-1999; 99US-0145088. PR 21-OCT-1999; 99US-0158665.  
 PR 22-JUL-1999; 99US-0145089. PR 21-OCT-1999; 99US-0158665.  
 PR 22-JUL-1999; 99US-0145192. PR 21-OCT-1999; 99US-0158665.  
 PR 23-JUL-1999; 99US-0145192. PR 22-OCT-1999; 99US-0158665.  
 PR 23-JUL-1999; 99US-0145218. PR 22-OCT-1999; 99US-0160767.  
 PR 23-JUL-1999; 99US-0145224. PR 21-OCT-1999; 99US-0160768.  
 PR 22-JUL-1999; 99US-0145276. PR 21-OCT-1999; 99US-0160770.  
 PR 27-JUL-1999; 99US-0145913. PR 25-OCT-1999; 99US-0160814.  
 PR 27-JUL-1999; 99US-0145918. PR 25-OCT-1999; 99US-0160815.  
 PR 27-JUL-1999; 99US-0145919. PR 22-OCT-1999; 99US-0160980.  
 PR 28-JUL-1999; 99US-0145951. PR 22-OCT-1999; 99US-0160981.  
 PR 03-AUG-1999; 99US-0146386. PR 22-OCT-1999; 99US-0160989.  
 PR 02-AUG-1999; 99US-0146388. PR 25-OCT-1999; 99US-0161404.  
 PR 03-AUG-1999; 99US-0146389. PR 25-OCT-1999; 99US-0161405.  
 PR 04-AUG-1999; 99US-0147038. PR 26-OCT-1999; 99US-0161359.  
 PR 04-AUG-1999; 99US-0147204. PR 26-OCT-1999; 99US-0161360.  
 PR 05-AUG-1999; 99US-0147260. PR 26-OCT-1999; 99US-0161361.  
 PR 06-AUG-1999; 99US-0147303. PR 28-OCT-1999; 99US-0161920.  
 PR 05-AUG-1999; 99US-0147416. PR 28-OCT-1999; 99US-0161920.  
 PR 09-AUG-1999; 99US-0147935. PR 28-OCT-1999; 99US-0161920.  
 PR 10-AUG-1999; 99US-0148111. PR 29-OCT-1999; 99US-0161920.  
 PR 11-AUG-1999; 99US-0148319. PR 29-OCT-1999; 99US-0161920.  
 PR 12-AUG-1999; 99US-0148319. PR 29-OCT-1999; 99US-0161920.  
 PR 13-AUG-1999; 99US-0148505. PR 29-OCT-1999; 99US-0161920.  
 PR 13-AUG-1999; 99US-0148684. PR 29-OCT-1999; 99US-0161920.  
 PR 16-AUG-1999; 99US-0149368. PR 29-OCT-1999; 99US-0161920.  
 PR 17-AUG-1999; 99US-0149175. PR 29-OCT-1999; 99US-0161920.  
 PR 20-AUG-1999; 99US-0149722. PR 29-OCT-1999; 99US-0161920.  
 PR 20-AUG-1999; 99US-0149723. PR 29-OCT-1999; 99US-0161920.  
 PR 23-AUG-1999; 99US-0149902. PR 29-OCT-1999; 99US-0161920.  
 PR 23-AUG-1999; 99US-0149930. PR 29-OCT-1999; 99US-0161920.

Query Match 57.7%; Score 392.8; DB 21; Length 1015;  
 Best Local Similarity 74.4%; Pred. No. 4.1e-127; Mismatches 172; Indels 3; Gaps 1;

Qy	Db	Qy	Db	Qy	Db	Qy	Db	Qy	Db
1	161	1	61	1	61	1	61	1	61
GACTACGGGAGCTGCCAGCGGCCACGCCATTATGGCTGGTGGCAGCATCTGGC	GACGAGGGAGGTGGCAAGGGCCACGCCATTATGGCTGGTGGCAGCATCTGGC	ACCATGGGTGAGCTGTGGTATGGGAATTATACAGCCAAAGGTATGGCAGAACAGC	ACATGGGGAGCTGTGGCTATGGAAATTATGGCTGGCAGCATCTGGCAGAACAGC	ACTGACACGACCTTAATGGGCCATTGGGAACTTATAGGTCACTGGCACCACAC	GTGGCGCTTGGACTGGCTTCAGCTGGCTGGCTGGCTGGCTGGCTGGCTGGC	GGCGCTTGGACTGGCTTCAGCTGGCTGGCTGGCTGGCTGGCTGGCTGGC	ACTGACACGACCTTAATGGGCCATTGGGAACTTATAGGTCACTGGCACCAC	121	121
99US-0140354.	99US-0140354.	99US-0140695.	99US-0140695.	99US-0140991.	99US-0140991.	99US-0140991.	99US-0140991.	GTGGCGCTTGGACTGGCTTCAGCTGGCTGGCTGGCTGGCTGGCTGGC	GTGGCGCTTGGACTGGCTTCAGCTGGCTGGCTGGCTGGCTGGC
99US-0142055.	99US-0142055.	99US-014290.	99US-014290.	99US-0142920.	99US-0142920.	99US-0142920.	99US-0142920.	GGCGCTTGGACTGGCTTCAGCTGGCTGGCTGGCTGGCTGGC	GGCGCTTGGACTGGCTTCAGCTGGCTGGCTGGCTGGC
99US-0144005.	99US-0144005.	99US-0144085.	99US-0144085.	99US-0144283.	99US-0144283.	99US-0144283.	99US-0144283.	ACTGACACGACCTTAATGGGCCATTGGGAACTTATAGGTCACTGGCACCAC	ACTGACACGACCTTAATGGGCCATTGGGAACTTATAGGTCACTGGCACCAC
99US-0144333.	99US-0144333.	99US-0144334.	99US-0144334.	99US-0144335.	99US-0144335.	99US-0144336.	99US-0144336.	181	181
99US-0144334.	99US-0144335.	99US-0144336.	99US-0144336.	99US-0144337.	99US-0144337.	99US-0144338.	99US-0144338.	AAGTGTAAACGGATACCCGAGGTTGGTCCTGGGTCACCCATCACCGTCACAGTCACACAC	AAGTGTAAACGGATACCCGAGGTTGGTCCTGGGTCACCCATCACCGTCACAGTCACACAC
99US-0144335.	99US-0144336.	99US-0144337.	99US-0144337.	99US-0144338.	99US-0144338.	99US-0144339.	99US-0144339.	400	341

OY	241	TCTTGCCCTCTTAACATGCTCTTCAACAACTGGATGGTGCACACCCTCTC	300	PR	04-MAY-1999;	99US-0132484.
Db	401	TTTGCCACCTAACCTGGCTCTCCAACATAATGGAGGTGGTGCACATTCTCTT	460	PR	05-MAY-1999;	99US-0132485.
OY	301	CACACTGAGCATGGTGAGCTCTTAAATGCTCAATACCGAGCTGGTAC	360	PR	06-MAY-1999;	99US-0132486.
QY	471		520	PR	07-MAY-1999;	99US-0132863.
Db	461	CACGATTCGACTTCGCGAGGCGCTTCAGATCGTCAGTATCGTGCCTGCATT	520	PR	11-MAY-1999;	99US-0134256.
OY	361	GTCGCCGTCCTTCGTAGGTACCATGATGAGAAGAGGTGGACTGAGTTACATC	420	PR	14-MAY-1999;	99US-0134219.
QY	521	GRGCTGCTCTTCAGGCTGATGAGAAGAGGAATAAGTTACGATC	580	PR	14-MAY-1999;	99US-0134221.
Db	421	AATGGCCACTCAACTTCACCTCGTTGATACAAACGTCGTTGGCAGGGACGTC	480	PR	14-MAY-1999;	99US-0134370.
Db	581	AAGGAACTCTCACTTCACCTCGTCACCTCGTCTGATCTCCACGTTAGAGGAGGAGCTA	640	PR	14-MAY-1999;	99US-0134370.
QY	481	CACTCTGTCCTAAAGGGTTCGAC---TGGATGGCATTCTGCTAGAATTGG	537	PR	18-MAY-1999;	99US-0134768.
Db	641	CAGGCCGTCATCAAAGGCTCAAACACATCTCAATGGCAAGGCCATTGCTTCAGTCACT	597	PR	19-MAY-1999;	99US-0134941.
Db	701	GGCAAACACTGGCAAGGAGCAAACTCTCAATGAGCTGAGGAGAATAAGTTACG	760	PR	20-MAY-1999;	99US-0135124.
OY	598	CTTAGTGTGGTGCACCTCTACTGCTTAACTCGTCTCCATGGCAATTGGC	657	PR	21-MAY-1999;	99US-0135353.
Db	761	AACGAGCCATGGCGCACACTGCTTACAAACGACGAGGCTCTTAATGGCAGTCGGA	820	PR	24-MAY-1999;	99US-0135629.
OY	658	CAAACTATGAAAGGCCCTCAATC	681	PR	25-MAY-1999;	99US-0136021.
Db	821	CAAACTTACCAAGGGTGTCACTC	844	PR	27-MAY-1999;	99US-0136392.
<hr/>						
RESULT 3						
AAC4077	ID	AAC4077 standard; DNA; 1016 BP.		PR	01-JUN-1999;	99US-0137222.
XX	XX			PR	03-JUN-1999;	99US-0137528.
AC	AC			PR	04-JUN-1999;	99US-0137502.
XX	XX			PR	05-JUN-1999;	99US-0137724.
DT	17-OCT-2000	(first entry)		PR	08-JUN-1999;	99US-0138094.
XX				PR	10-JUN-1999;	99US-0138540.
DE	Arabidopsis thaliana	DNA fragment SEQ ID NO: 29509.		PR	10-JUN-1999;	99US-0138847.
XX				PR	14-JUN-1999;	99US-0139119.
KW	Hybridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.			PR	16-JUN-1999;	99US-0139452.
XX				PR	16-JUN-1999;	99US-0139453.
OS	Arabidopsis thaliana.			PR	17-JUN-1999;	99US-0139492.
XX				PR	18-JUN-1999;	99US-0139454.
PN	EP1033405-A2.			PR	18-JUN-1999;	99US-0139455.
XX				PR	18-JUN-1999;	99US-0139456.
PD	06-SEP-2-2000.			PR	18-JUN-1999;	99US-0139457.
XX				PR	18-JUN-1999;	99US-0139458.
PF	25-FEB-2000:	2000FP-0301439.		PR	18-JUN-1999;	99US-0139459.
XX				PR	18-JUN-1999;	99US-0139460.
PR	25-FEB-1999:	99US-0121825.		PR	18-JUN-1999;	99US-0139461.
PR	05-MAR-1999;	99US-0123180.		PR	18-JUN-1999;	99US-0139462.
PR	09-MAR-1999;	99US-0123548.		PR	18-JUN-1999;	99US-0139463.
PR	23-MAR-1999;	99US-0125788.		PR	18-JUN-1999;	99US-0139750.
PR	25-MAR-1999;	99US-0126264.		PR	21-JUN-1999;	99US-0139763.
PR	29-MAR-1999;	99US-0126785.		PR	22-JUN-1999;	99US-0139817.
PR	01-APR-1999;	99US-0127462.		PR	23-JUN-1999;	99US-0140354.
PR	06-APR-1999;	99US-0128234.		PR	24-JUN-1999;	99US-0140695.
PR	08-APR-1999;	99US-0128714.		PR	28-JUN-1999;	99US-0140823.
PR	16-APR-1999;	99US-0129845.		PR	29-JUN-1999;	99US-0140991.
PR	19-APR-1999;	99US-0130077.		PR	30-JUN-1999;	99US-0141287.
PR	21-APR-1999;	99US-0130449.		PR	01-JUL-1999;	99US-0141842.
PR	23-APR-1999;	99US-0130510.		PR	01-JUL-1999;	99US-0142154.
PR	23-APR-1999;	99US-0130931.		PR	02-JUL-1999;	99US-0142055.
PR	28-APR-1999;	99US-0131449.		PR	06-JUL-1999;	99US-0142390.
PR	30-APR-1999;	99US-0132048.		PR	08-JUL-1999;	99US-0142803.
PR	30-APR-1999;	99US-0132407.		PR	09-JUL-1999;	99US-0142920.
PR	21-JUL-1999;	99US-014325.		PR	12-JUL-1999;	99US-0142977.
PR	13-JUL-1999;	99US-014342.		PR	13-JUL-1999;	99US-0143624.
PR	14-JUL-1999;	99US-0143624.		PR	15-JUL-1999;	99US-0144005.
PR	15-JUL-1999;	99US-0144005.		PR	16-JUL-1999;	99US-0144085.
PR	16-JUL-1999;	99US-0144086.		PR	19-JUL-1999;	99US-0144334.
PR	19-JUL-1999;	99US-0144335.		PR	19-JUL-1999;	99US-0144335.
PR	20-JUL-1999;	99US-0144352.		PR	20-JUL-1999;	99US-0144632.
PR	20-JUL-1999;	99US-0144884.		PR	21-JUL-1999;	99US-0144814.
PR	21-JUL-1999;	99US-0144886.		PR	21-JUL-1999;	99US-0145088.

		PR	21-OCT-1999;	99US-0160768.
PR	22-JUL-1999;	99US-0145085.	PR	21-OCT-1999;
PR	22-JUL-1999;	99US-0145089.	PR	21-OCT-1999;
PR	22-JUL-1999;	99US-0145192.	PR	21-OCT-1999;
PR	23-JUL-1999;	99US-0145345.	PR	22-OCT-1999;
PR	23-JUL-1999;	99US-0145218.	PR	22-OCT-1999;
PR	23-JUL-1999;	99US-0145224.	PR	22-OCT-1999;
PR	26-JUL-1999;	99US-0145276.	PR	25-OCT-1999;
PR	27-JUL-1999;	99US-0145913.	PR	25-OCT-1999;
PR	27-JUL-1999;	99US-0145918.	PR	26-OCT-1999;
PR	28-JUL-1999;	99US-0145919.	PR	26-OCT-1999;
PR	28-JUL-1999;	99US-0145951.	PR	26-OCT-1999;
PR	02-AUG-1999;	99US-0146306.	PR	28-OCT-1999;
PR	02-AUG-1999;	99US-0146308.	PR	28-OCT-1999;
PR	03-AUG-1999;	99US-0146309.	PR	28-OCT-1999;
PR	04-AUG-1999;	99US-0146309.	PR	28-OCT-1999;
PR	04-AUG-1999;	99US-0147204.	PR	29-OCT-1999;
PR	05-AUG-1999;	99US-0147302.	PR	29-OCT-1999;
PR	05-AUG-1999;	99US-0147260.	PR	05-AUG-1999;
PR	06-AUG-1999;	99US-0147303.	PR	06-AUG-1999;
PR	09-AUG-1999;	99US-0147415.	PR	09-AUG-1999;
PR	09-AUG-1999;	99US-0147493.	PR	09-AUG-1999;
PR	10-AUG-1999;	99US-0147935.	PR	10-AUG-1999;
PR	11-AUG-1999;	99US-0148319.	PR	12-AUG-1999;
PR	12-AUG-1999;	99US-0148341.	PR	13-AUG-1999;
PR	13-AUG-1999;	99US-0148565.	PR	13-AUG-1999;
PR	13-AUG-1999;	99US-0148684.	PR	16-AUG-1999;
PR	17-AUG-1999;	99US-0149175.	PR	18-AUG-1999;
PR	18-AUG-1999;	99US-0149426.	PR	20-AUG-1999;
PR	20-AUG-1999;	99US-0149723.	PR	20-AUG-1999;
PR	23-AUG-1999;	99US-0149929.	PR	23-AUG-1999;
PR	23-AUG-1999;	99US-0149902.	PR	23-AUG-1999;
PR	25-AUG-1999;	99US-0150566.	PR	26-AUG-1999;
PR	26-AUG-1999;	99US-0150884.	PR	27-AUG-1999;
PR	27-AUG-1999;	99US-0151055.	PR	27-AUG-1999;
PR	27-AUG-1999;	99US-0151066.	PR	31-AUG-1999;
PR	31-AUG-1999;	99US-0151438.	PR	31-AUG-1999;
PR	01-SEP-1999;	99US-0151930.	PR	07-SEP-1999;
PR	07-SEP-1999;	99US-0152363.	PR	10-SEP-1999;
PR	13-SEP-1999;	99US-0153070.	PR	13-SEP-1999;
PR	15-SEP-1999;	99US-0154018.	PR	16-SEP-1999;
PR	16-SEP-1999;	99US-0154039.	PR	20-SEP-1999;
PR	22-SEP-1999;	99US-0155139.	PR	23-SEP-1999;
PR	24-SEP-1999;	99US-0155486.	PR	28-SEP-1999;
PR	28-SEP-1999;	99US-0156458.	PR	29-SEP-1999;
PR	29-SEP-1999;	99US-0156596.	PR	04-OCT-1999;
PR	13-OCT-1999;	99US-0157117.	PR	05-OCT-1999;
PR	13-OCT-1999;	99US-0157753.	PR	06-OCT-1999;
PR	07-OCT-1999;	99US-0157865.	PR	07-OCT-1999;
PR	08-OCT-1999;	99US-0158029.	PR	14-OCT-1999;
PR	12-OCT-1999;	99US-0158369.	PR	14-OCT-1999;
PR	14-OCT-1999;	99US-0159293.	PR	14-OCT-1999;
PR	18-OCT-1999;	99US-0159638.	PR	18-OCT-1999;
PR	21-OCT-1999;	99US-0160741.	PR	21-OCT-1999;
PR	29-OCT-1999;	99US-0160767.		

RESULT 4  
ARC50628



PR	23-AUG-1999;	99US-0149930.
PR	25-AUG-1999;	99US-0150566.
PR	26-AUG-1999;	99US-0150884.
PR	27-AUG-1999;	99US-0151065.
PR	27-AUG-1999;	99US-0151080.
PR	30-AUG-1999;	99US-0151303.
PR	31-AUG-1999;	99US-0151438.
PR	01-SEP-1999;	99US-0151930.
PR	07-SEP-1999;	99US-0152363.
PR	10-SEP-1999;	99US-0153070.
PR	13-SEP-1999;	99US-0153758.
PR	15-SEP-1999;	99US-0154018.
PR	16-SEP-1999;	99US-0154039.
PR	20-SEP-1999;	99US-0154779.
PR	22-SEP-1999;	99US-0155139.
PR	23-SEP-1999;	99US-0155486.
PR	24-SEP-1999;	99US-0155659.
PR	28-SEP-1999;	99US-0156458.
PR	29-SEP-1999;	99US-0156596.
PR	04-OCT-1999;	99US-0157117.
PR	05-OCT-1999;	99US-0157753.
PR	06-OCT-1999;	99US-0157865.
PR	07-OCT-1999;	99US-0158029.
PR	08-OCT-1999;	99US-0158232.
PR	12-OCT-1999;	99US-0158369.
PR	13-OCT-1999;	99US-0159293.
PR	13-OCT-1999;	99US-0159294.
PR	14-OCT-1999;	99US-0159329.
PR	14-OCT-1999;	99US-0159330.
PR	14-OCT-1999;	99US-0159331.
PR	14-OCT-1999;	99US-0159637.
PR	14-OCT-1999;	99US-0159638.
PR	18-OCT-1999;	99US-0159584.
PR	21-OCT-1999;	99US-0160741.
PR	21-OCT-1999;	99US-0160767.
PR	21-OCT-1999;	99US-0160768.
PR	21-OCT-1999;	99US-0160770.
PR	21-OCT-1999;	99US-0160814.
PR	21-OCT-1999;	99US-0160815.
PR	22-OCT-1999;	99US-0160980.
PR	22-OCT-1999;	99US-0160981.
PR	22-OCT-1999;	99US-0160989.
PR	25-OCT-1999;	99US-0161404.
PR	25-OCT-1999;	99US-0161405.
PR	25-OCT-1999;	99US-0161405.
PR	26-OCT-1999;	99US-0161359.
PR	26-OCT-1999;	99US-0161360.
PR	26-OCT-1999;	99US-0161361.
PR	28-OCT-1999;	99US-0161920.
PR	28-OCT-1999;	99US-0161992.
PR	28-OCT-1999;	99US-0161993.
PR	29-OCT-1999;	99US-0162142.
Query Match 55.4%; Score 377.6; DB 21; Length 780; Best Local Similarity 72.2%; Pred. No. 7.8e-122; Matches 491; Conservative 0; Mismatches 189; Indels 0; Gaps 0		
Qy	2 ACTACGGGTGCGAGCCTATTTAACATGGTAACTGCGCTTCACCCACTTTACGGGTGCTGATCTTCGGCA	61
Db	95 ACGGTGGCTGATCACGCCACCTTACGGGTGCTGATCTTCGGCA	154
Qy	62 CCTATGGGTGAGCTTGCGGTATGGGAATTATACAGCCAGGTATGGCACGACCG	121
Db	155 CAATGGGTGCTGATGGATACTATATAGCCAAAGCTAGGGAGGACCG	214
Qy	122 TGGCGCTGAGCACTGGCTATTTAACATGGTAACTGCGCTTCACCCACTTTACGGGTGCTGATCTTCGGCA	181
Db	215 CGGTCTAGCACAGCTCTCTCACACATGGACTAGCTGTTCTCTGTTAGATA	274
Qy	182 CTGTACACGACCTAATGGTCCTCCGGAACTATAGGGTCACTGGTCACTGGCAACT	241

## RESULT

AAC33521

AAC33521 standard; DNA; 1198 BP

AC  
AAC33321;

DT 17-OCT-2000 (first entry)

Arachidoneis thalassae DNA f1

XX

Kwiatkowski et al. • Protein Identification by Signal Transduction Pathways

metabolic pathway; promoter; termination sequence; ss.

OS *Arabidopsis thaliana*

XX  
XX

XX

FD-3509-2000.

PF 25-FEB-2000; 2000EP-0301439

PR 25-FEB-1999: 9911S-0121825

PR 05-MAR-1999; 990S-0123186

PR 23-MAR-1999; 99US-0125788

PR 23-MAR-1999; 9905-0126264  
PP

PR 01-APR-1999; 99US-012746;

BB 08=ABB=1998: 98115=0138714

PR 16-APR-1999; 99US-0129845

PR 21-APR-1999: 99US-0130449

PR 23-APK-1999 9905-0130510

PR 28-APR-1999; 99US-0131449

PR 30-APR-1999; 99US-0132041

PR	30-APR-1999;	99US-0132407.	PR	21-JUL-1999;	99US-0145088.
PR	04-MAY-1999;	99US-0134484.	PR	22-JUL-1999;	99US-0145085.
PR	05-MAY-1999;	99US-0132485.	PR	22-JUL-1999;	99US-0145089.
PR	06-MAY-1999;	99US-0132487.	PR	22-JUL-1999;	99US-0145192.
PR	07-MAY-1999;	99US-0132863.	PR	23-JUL-1999;	99US-0145145.
PR	11-MAY-1999;	99US-0134256.	PR	23-JUL-1999;	99US-0145218.
PR	14-MAY-1999;	99US-0134218.	PR	23-JUL-1999;	99US-0145224.
PR	14-MAY-1999;	99US-0134219.	PR	26-JUL-1999;	99US-0145276.
PR	14-MAY-1999;	99US-0134221.	PR	27-JUL-1999;	99US-0145913.
PR	14-MAY-1999;	99US-0134370.	PR	27-JUL-1999;	99US-0145918.
PR	18-MAY-1999;	99US-0134768.	PR	27-JUL-1999;	99US-0145919.
PR	19-MAY-1999;	99US-0134941.	PR	28-JUL-1999;	99US-0145951.
PR	20-MAY-1999;	99US-0135124.	PR	02-AUG-1999;	99US-0146386.
PR	21-MAY-1999;	99US-0135353.	PR	02-AUG-1999;	99US-0146388.
PR	24-MAY-1999;	99US-0135629.	PR	02-AUG-1999;	99US-0146389.
PR	25-MAY-1999;	99US-0136021.	PR	03-AUG-1999;	99US-0147416.
PR	27-MAY-1999;	99US-0136392.	PR	04-AUG-1999;	99US-0147433.
PR	28-MAY-1999;	99US-0136782.	PR	04-AUG-1999;	99US-0147302.
PR	01-JUN-1999;	99US-0137222.	PR	05-AUG-1999;	99US-0147311.
PR	03-JUN-1999;	99US-0137528.	PR	05-AUG-1999;	99US-0147360.
PR	04-JUN-1999;	99US-0137502.	PR	06-AUG-1999;	99US-0147303.
PR	07-JUN-1999;	99US-0137724.	PR	06-AUG-1999;	99US-0147413.
PR	08-JUN-1999;	99US-0138094.	PR	09-AUG-1999;	99US-014743.
PR	10-JUN-1999;	99US-0138540.	PR	09-AUG-1999;	99US-0147335.
PR	10-JUN-1999;	99US-0138847.	PR	10-AUG-1999;	99US-0147371.
PR	14-JUN-1999;	99US-0139119.	PR	11-AUG-1999;	99US-0147360.
PR	16-JUN-1999;	99US-0139452.	PR	12-AUG-1999;	99US-0147305.
PR	16-JUN-1999;	99US-0139457.	PR	13-AUG-1999;	99US-0147416.
PR	17-JUN-1999;	99US-0139458.	PR	13-AUG-1999;	99US-0147433.
PR	18-JUN-1999;	99US-0139492.	PR	16-AUG-1999;	99US-0147335.
PR	18-JUN-1999;	99US-0139454.	PR	17-AUG-1999;	99US-0147375.
PR	18-JUN-1999;	99US-0139455.	PR	18-AUG-1999;	99US-0148341.
PR	18-JUN-1999;	99US-0139462.	PR	19-AUG-1999;	99US-0148344.
PR	18-JUN-1999;	99US-0139463.	PR	20-AUG-1999;	99US-0149222.
PR	18-JUN-1999;	99US-0139750.	PR	20-AUG-1999;	99US-0149223.
PR	18-JUN-1999;	99US-0139763.	PR	20-AUG-1999;	99US-0149323.
PR	21-JUN-1999;	99US-0139460.	PR	23-AUG-1999;	99US-0149302.
PR	22-JUN-1999;	99US-0139461.	PR	23-AUG-1999;	99US-0149310.
PR	23-JUN-1999;	99US-0139462.	PR	25-AUG-1999;	99US-0150666.
PR	18-JUN-1999;	99US-0139463.	PR	26-AUG-1999;	99US-0150834.
PR	18-JUN-1999;	99US-0139467.	PR	27-AUG-1999;	99US-0151065.
PR	18-JUN-1999;	99US-0139495.	PR	27-AUG-1999;	99US-0149306.
PR	21-JUN-1999;	99US-0139499.	PR	27-AUG-1999;	99US-0149322.
PR	22-JUN-1999;	99US-0139899.	PR	30-AUG-1999;	99US-015103.
PR	23-JUN-1999;	99US-0140353.	PR	31-AUG-1999;	99US-0151458.
PR	23-JUN-1999;	99US-0140354.	PR	01-SEP-1999;	99US-0151330.
PR	24-JUN-1999;	99US-0140695.	PR	07-SEP-1999;	99US-015363.
PR	28-JUN-1999;	99US-0140823.	PR	10-SEP-1999;	99US-0153070.
PR	29-JUN-1999;	99US-0140991.	PR	13-SEP-1999;	99US-0153158.
PR	30-JUN-1999;	99US-0141287.	PR	15-SEP-1999;	99US-0154118.
PR	01-JUL-1999;	99US-0141842.	PR	16-SEP-1999;	99US-0154339.
PR	01-JUL-1999;	99US-0142154.	PR	20-SEP-1999;	99US-0154779.
PR	02-JUL-1999;	99US-0142055.	PR	22-SEP-1999;	99US-0155139.
PR	06-JUL-1999;	99US-0142390.	PR	23-SEP-1999;	99US-0155386.
PR	08-JUL-1999;	99US-0142803.	PR	24-SEP-1999;	99US-0155359.
PR	09-JUL-1999;	99US-0142920.	PR	28-SEP-1999;	99US-0156558.
PR	12-JUL-1999;	99US-0142977.	PR	29-SEP-1999;	99US-0156596.
PR	13-JUL-1999;	99US-0143542.	PR	04-OCT-1999;	99US-0157117.
PR	14-JUL-1999;	99US-0143624.	PR	05-OCT-1999;	99US-0157553.
PR	15-JUL-1999;	99US-0144005.	PR	06-OCT-1999;	99US-0157665.
PR	16-JUL-1999;	99US-0144333.	PR	07-OCT-1999;	99US-0158029.
PR	19-JUL-1999;	99US-0144334.	PR	08-OCT-1999;	99US-0158322.
PR	19-JUL-1999;	99US-0144335.	PR	12-OCT-1999;	99US-0159331.
PR	20-JUL-1999;	99US-0144352.	PR	13-OCT-1999;	99US-0159337.
PR	20-JUL-1999;	99US-0144632.	PR	14-OCT-1999;	99US-0159338.
PR	21-JUL-1999;	99US-0144884.	PR	18-OCT-1999;	99US-0159384.
PR	21-JUL-1999;	99US-0145086.	PR	21-OCT-1999;	99US-0160741.



PR 18-JUN-1999; 99US-0139460. PR 23-AUG-1999; 99US-0149902.  
 PR 18-JUN-1999; 99US-0139461. PR 23-AUG-1999; 99US-0149930.  
 PR 18-JUN-1999; 99US-0139462. PR 25-AUG-1999; 99US-0150566.  
 PR 18-JUN-1999; 99US-0139750. PR 26-AUG-1999; 99US-0150884.  
 PR 18-JUN-1999; 99US-0139763. PR 27-AUG-1999; 99US-0151065.  
 PR 21-JUN-1999; 99US-0139817. PR 27-AUG-1999; 99US-0151066.  
 PR 22-JUN-1999; 99US-0139899. PR 27-AUG-1999; 99US-0151080.  
 PR 23-JUN-1999; 99US-0140353. PR 30-AUG-1999; 99US-0151303.  
 PR 24-JUN-1999; 99US-0140695. PR 31-AUG-1999; 99US-0151438.  
 PR 28-JUN-1999; 99US-0140823. PR 01-SEP-1999; 99US-0151930.  
 PR 29-JUN-1999; 99US-0140991. PR 07-SEP-1999; 99US-0152363.  
 PR 30-JUN-1999; 99US-0141287. PR 10-SEP-1999; 99US-0153070.  
 PR 01-JUL-1999; 99US-0141842. PR 13-SEP-1999; 99US-0153758.  
 PR 01-JUL-1999; 99US-0142154. PR 15-SEP-1999; 99US-0154018.  
 PR 02-JUL-1999; 99US-0142055. PR 16-SEP-1999; 99US-0154309.  
 PR 06-JUL-1999; 99US-0142390. PR 20-SEP-1999; 99US-0154779.  
 PR 08-JUL-1999; 99US-0142803. PR 23-SEP-1999; 99US-0155139.  
 PR 09-JUL-1999; 99US-0142920. PR 23-SEP-1999; 99US-0155485.  
 PR 12-JUL-1999; 99US-0143077. PR 24-SEP-1999; 99US-0155659.  
 PR 13-JUL-1999; 99US-0143542. PR 28-SEP-1999; 99US-0156458.  
 PR 14-JUL-1999; 99US-0143624. PR 20-OCT-1999; 99US-0156439.  
 PR 15-JUL-1999; 99US-0144005. PR 21-OCT-1999; 99US-0156596.  
 PR 16-JUL-1999; 99US-0144085. PR 05-OCT-1999; 99US-0157753.  
 PR 16-JUL-1999; 99US-0144335. PR 07-OCT-1999; 99US-0157865.  
 PR 19-JUL-1999; 99US-0144325. PR 08-OCT-1999; 99US-0158232.  
 PR 19-JUL-1999; 99US-0144331. PR 12-OCT-1999; 99US-0158369.  
 PR 19-JUL-1999; 99US-0144332. PR 04-OCT-1999; 99US-0158393.  
 PR 19-JUL-1999; 99US-0144333. PR 13-OCT-1999; 99US-0158394.  
 PR 19-JUL-1999; 99US-0144334. PR 13-OCT-1999; 99US-0159935.  
 PR 19-JUL-1999; 99US-0144335. PR 14-OCT-1999; 99US-0159330.  
 PR 20-JUL-1999; 99US-0144352. PR 14-OCT-1999; 99US-0159331.  
 PR 20-JUL-1999; 99US-0144632. PR 14-OCT-1999; 99US-0159637.  
 PR 21-JUL-1999; 99US-0144884. PR 14-OCT-1999; 99US-0159638.  
 PR 21-JUL-1999; 99US-0144814. PR 18-OCT-1999; 99US-0159584.  
 PR 21-JUL-1999; 99US-0145086. PR 21-OCT-1999; 99US-0159339.  
 PR 21-JUL-1999; 99US-0145088. PR 14-OCT-1999; 99US-0159330.  
 PR 22-JUL-1999; 99US-0145085. PR 21-OCT-1999; 99US-0159331.  
 PR 22-JUL-1999; 99US-0145087. PR 21-OCT-1999; 99US-0159637.  
 PR 22-JUL-1999; 99US-0145089. PR 21-OCT-1999; 99US-0159638.  
 PR 22-JUL-1999; 99US-0145192. PR 21-OCT-1999; 99US-0159935.  
 PR 23-JUL-1999; 99US-0145145. PR 21-OCT-1999; 99US-0160299.  
 PR 23-JUL-1999; 99US-0145224. PR 22-OCT-1999; 99US-0160677.  
 PR 26-JUL-1999; 99US-0145276. PR 22-OCT-1999; 99US-0160818.  
 PR 27-JUL-1999; 99US-0145913. PR 21-OCT-1999; 99US-0160770.  
 PR 27-JUL-1999; 99US-0145918. PR 21-OCT-1999; 99US-0160814.  
 PR 27-JUL-1999; 99US-0145919. PR 21-OCT-1999; 99US-0160815.  
 PR 28-JUL-1999; 99US-0145951. PR 22-OCT-1999; 99US-0160981.  
 PR 02-AUG-1999; 99US-0146386. PR 22-OCT-1999; 99US-0160889.  
 PR 02-AUG-1999; 99US-0146388. PR 25-OCT-1999; 99US-0161005.  
 PR 02-AUG-1999; 99US-0146389. PR 25-OCT-1999; 99US-0161005.  
 PR 03-AUG-1999; 99US-0147038. PR 25-OCT-1999; 99US-0161406.  
 PR 04-AUG-1999; 99US-0147204. PR 22-OCT-1999; 99US-0160980.  
 PR 05-AUG-1999; 99US-0147302. PR 22-OCT-1999; 99US-0160981.  
 PR 05-AUG-1999; 99US-0147260. PR 22-OCT-1999; 99US-0160889.  
 PR 06-AUG-1999; 99US-0147303. PR 25-OCT-1999; 99US-0161005.  
 PR 06-AUG-1999; 99US-0147416. PR 25-OCT-1999; 99US-0161005.  
 PR 09-AUG-1999; 99US-0147455. PR 25-OCT-1999; 99US-0161005.  
 PR 09-AUG-1999; 99US-0147935. PR 25-OCT-1999; 99US-0161005.  
 PR 10-AUG-1999; 99US-0148171. PR 25-OCT-1999; 99US-0161005.  
 PR 11-AUG-1999; 99US-0148319. PR 25-OCT-1999; 99US-0161005.  
 PR 12-AUG-1999; 99US-0148341. PR 25-OCT-1999; 99US-0161005.  
 PR 13-AUG-1999; 99US-0148565. PR 25-OCT-1999; 99US-0161005.  
 PR 13-AUG-1999; 99US-0148684. PR 28-OCT-1999; 99US-0161992.  
 PR 16-AUG-1999; 99US-0149368. PR 28-OCT-1999; 99US-0161992.  
 PR 17-AUG-1999; 99US-0149175. PR 28-OCT-1999; 99US-0161992.  
 PR 18-AUG-1999; 99US-0149426. PR 28-OCT-1999; 99US-0161992.  
 PR 20-AUG-1999; 99US-0149722. PR 28-OCT-1999; 99US-0161992.  
 PR 20-AUG-1999; 99US-0149723. PR 28-OCT-1999; 99US-0161992.  
 PR 20-AUG-1999; 99US-0149929. PR 29-OCT-1999; 99US-0162142.

Query Match 55.4%; Score 377.6; DB 21; Length 1233;  
 Best Local Similarity 72.2%; Pred. No. 1e-121;  
 Matches 491; Conservative 0; Mismatches 189; Indels 0; Gaps 0;

Qy	2 ACTACCGTGGCTGGAGGAGGCCACGCCACCTTATATGGTGGTGGCAGCACTTCGGCA	61
Db	158 ACGGTCGGCTGGATCACAGCTCACGCCACTTTACGGTGGGGTGTGCTTCGGCA	217
Qy	62 CCATGGTGGAGCTTGCTGGATGAATTACAGCAAGGTTATGCCACGACAGCAG	121
Db	218 CAATGGTGGCTGGATGGTAACTTATAGCCAAAGCTACCGGACGAGCAG	277
Qy	122 TGGCGCTGAGCACTGGGCTTAACATGGATAAGTGTGGTGGCTGGCTGGAAATGA	181
Db	278 CGGCTCTAACACAGCTCTTCACAATGGACTAGCTGGTGTGCTTGAGATAA	337
Qy	182 CTGTACAAACGACCTAAATGGTGCCTCCGGAACTATTAGGGTCACTGCCACCAACT	241

Db	338	GATGTTAAACAGATGGTAAATGGTTTACTGGCTCAATGTTGTAACGGCTACAAC	397	PR	30-APR-1999;	99US-0132048.
Oy	242	TTCGCCTCTTAACTTTGCTCTCCCTAACACAATGGTGATGGCGAACCCCTCTC	301	PR	04-MAY-1999;	99US-0132484.
Db	398	TCTGCCGCCAATAACGCCCTAGGACACATAATGCCGTTGGCTAAATCCCTCTG	457	PR	05-MAY-1999;	99US-0132485.
Oy	302	AACACTTCGATGGCTGAGCTGCCCTCAAATGCGCAACCCCTCTC	361	PR	06-MAY-1999;	99US-0132486.
Db	458	AACACTTGAGCTGCTCACCGTGTGTTAACGATTGCGACAGTGAACTG	517	PR	07-MAY-1999;	99US-0132487.
Oy	362	TCCCCGCTCTTCTACAGAAGGGTCCUTGAGGAGAGAGGAAATAAGATCAGATA	421	PR	11-MAY-1999;	99US-013256.
Db	518	TCCCGTTTCTACAGAAGGGTCCUTGAGGAGAGGAAATAAGATCAGATA	577	PR	14-MAY-1999;	99US-013218.
Oy	422	ATGGCACTCAACTCTAACCTCGTTGATCACAAACGCTGGTGGCGCACGTC	481	PR	14-MAY-1999;	99US-0134219.
Db	578	ACGGCCACTCTACTCTAACCTGTCTGATCACAAACGCTGGTGGCGAGACGTC	637	PR	14-MAY-1999;	99US-0134221.
Oy	482	ACTCTGTGTTGATAAAGGGCTCTGAACTCTGATGGCAATCATGCTGATGAAATGGGGC	541	PR	18-MAY-1999;	99US-013468.
Db	638	ACTCGGGGGGATCAGGTTCAAGGAACAGCTGGCAAGGACTGGGAATGGGGC	697	PR	20-MAY-1999;	99US-013491.
Oy	542	AAACTGGCAAGCAACAACTATCTAACATGCCAACGGCTTCTTCAGTCACTTA	601	PR	21-MAY-1999;	99US-013535.
Db	698	AAAATGGCAAGCAACTCTAACATGCCAACGGCTTCTTCAGTCACTTA	757	PR	24-MAY-1999;	99US-013629.
Oy	602	GTGATGTCGACTCTCACTGCTCTATAATGTTGTTCTCAATGGCAATTGCCAA	661	PR	25-MAY-1999;	99US-013621.
Db	758	GGCACGCCGACAGTGTCTCTCACCGCGCTGTGGCTGTATGCCAGA	817	PR	27-MAY-1999;	99US-0136392.
Oy	662	CCTATGAAAGSCTCATTC	681	PR	28-MAY-1999;	99US-0136782.
Db	818	CTTTGCCGTTGACAGTTC	837	PR	01-JUN-1999;	99US-013722.
<b>RESULT 7</b>						
AAC40035				PR	03-JUN-1999;	99US-0137528.
ID				PR	04-JUN-1999;	99US-0137502.
XX				PR	07-JUN-1999;	99US-0137724.
AC				PR	08-JUN-1999;	99US-0138094.
XX				PR	10-JUN-1999;	99US-0138780.
DT				PR	10-JUN-1999;	99US-0138847.
XX				PR	14-JUN-1999;	99US-0139119.
	17-OCT-2000 (first entry)			PR	16-JUN-1999;	99US-0139452.
DE				PR	17-JUN-1999;	99US-0139453.
XX				PR	18-JUN-1999;	99US-0139492.
XX				PR	18-JUN-1999;	99US-0139454.
KW				PR	18-JUN-1999;	99US-0139461.
XX				PR	18-JUN-1999;	99US-0139462.
KW				PR	18-JUN-1999;	99US-0139463.
XX				PR	18-JUN-1999;	99US-0139475.
KW				PR	18-JUN-1999;	99US-0139476.
XX				PR	21-JUN-1999;	99US-0139460.
OS				PR	22-JUN-1999;	99US-0139817.
XX				PR	23-JUN-1999;	99US-0140533.
PN				PR	23-JUN-1999;	99US-0140554.
XX				PR	24-JUN-1999;	99US-0140695.
BP1033405-A2.				PR	28-JUN-1999;	99US-0140823.
XX				PR	29-JUN-1999;	99US-0140891.
PD				PR	30-JUN-1999;	99US-0141287.
XX				PR	01-JUL-1999;	99US-0141842.
06-SEP-2000.				PR	01-JUL-1999;	99US-0142154.
PF				PR	02-JUL-1999;	99US-0142055.
XX				PR	06-JUL-1999;	99US-0142300.
PF				PR	08-JUL-1999;	99US-0142803.
XX				PR	09-JUL-1999;	99US-0142930.
PF				PR	12-JUL-1999;	99US-0142977.
PR				PR	13-JUL-1999;	99US-0143022.
PR				PR	14-JUL-1999;	99US-0144325.
PR				PR	15-JUL-1999;	99US-0144005.
PR				PR	16-JUL-1999;	99US-0144085.
PR				PR	16-JUL-1999;	99US-0144287.
PR				PR	19-JUL-1999;	99US-0144325.
PR				PR	19-JUL-1999;	99US-0144332.
PR				PR	19-JUL-1999;	99US-0144333.
PR				PR	19-JUL-1999;	99US-0144334.
PR				PR	19-JUL-1999;	99US-0144334.
PR				PR	21-APR-1999;	99US-0130077.
PR				PR	21-APR-1999;	99US-0130449.
PR				PR	23-APR-1999;	99US-0130510.
PR				PR	23-APR-1999;	99US-0130891.
PR				PR	28-APR-1999;	99US-0131449.
PR				PR	28-APR-1999;	99US-013144949.

	PR	21-JUL-1999;	99US-0145086.	PR	21-OCT-1999;	99US-0160741.
	PR	21-JUL-1999;	99US-0145088.	PR	21-OCT-1999;	99US-0160767.
	PR	22-JUL-1999;	99US-0145085.	PR	21-OCT-1999;	99US-0160768.
	PR	22-JUL-1999;	99US-0145087.	PR	21-OCT-1999;	99US-0160770.
	PR	22-JUL-1999;	99US-0145089.	PR	21-OCT-1999;	99US-0160814.
	PR	22-JUL-1999;	99US-0145192.	PR	21-OCT-1999;	99US-0160815.
	PR	23-JUL-1999;	99US-0145145.	PR	21-OCT-1999;	99US-0160980.
	PR	23-JUL-1999;	99US-0145218.	PR	22-OCT-1999;	99US-0160981.
	PR	23-JUL-1999;	99US-0145224.	PR	22-OCT-1999;	99US-0160989.
	PR	26-JUL-1999;	99US-0145226.	PR	25-OCT-1999;	99US-0161404.
	PR	27-JUL-1999;	99US-0145913.	PR	25-OCT-1999;	99US-0161405.
	PR	27-JUL-1999;	99US-0145918.	PR	26-OCT-1999;	99US-0161359.
	PR	28-JUL-1999;	99US-0145951.	PR	26-OCT-1999;	99US-0161360.
	PR	02-AUG-1999;	99US-0146386.	PR	26-OCT-1999;	99US-0161361.
	PR	02-AUG-1999;	99US-0146389.	PR	28-OCT-1999;	99US-0161920.
	PR	03-AUG-1999;	99US-0147038.	PR	28-OCT-1999;	99US-0161992.
	PR	04-AUG-1999;	99US-0147204.	PR	28-OCT-1999;	99US-0161993.
	PR	04-AUG-1999;	99US-0147302.	PR	29-OCT-1999;	99US-0162142.
	PR	05-AUG-1999;	99US-0147260.	Query Match	53.8%; Score 366.6; DB 21; Length 1236;	
	PR	06-AUG-1999;	99US-0147303.	Best Local Similarity 72.1%; Pred. No. 7.4e-118;		
	PR	06-AUG-1999;	99US-0147416.	Matches 491; Conservative 0; Mismatches 189; Indels 1; Gaps 1;		
	PR	09-AUG-1999;	99US-0147493.	QY	2 ACTACGGTGCCTGGCAGAGCGGCCACCTTATGCTGGTGTGACGCCATCTGGCA 61	
	PR	09-AUG-1999;	99US-0147935.	Db	160 AGGGTGGCGGTGGATCACCGCTCAGCCATTTCAGCTGGTGTGATGCTRCGGCA 219	
	PR	10-AUG-1999;	99US-0148171.	QY	62 CCATGGGTGAGCTTGTTGGATGGAATTTATACAGCCAGGGATGGACAGCACCG 121	
	PR	11-AUG-1999;	99US-0148319.	Db	220 CAATGGGTGAGCTTGTTGGATGGAATTTATACAGCCAGGGATGGACAGCACCG 279	
	PR	12-AUG-1999;	99US-0148341.	QY	122 TGGCGCTGAGCACTG-CGCTATTAACTAATGATTAAGTGTGGTGTGCTTGAATG 180	
	PR	13-AUG-1999;	99US-0148565.	Db	280 CGGCTTAAGCACGAGCACGAGCTCTCTCACAAATGACTTAGCTGTTGGTCTCTTGAGATA 339	
	PR	13-AUG-1999;	99US-0148684.	QY	181 ACTTGGTACAACGACCTTAATGGGCCCTGGGACTTTAGGTCACTGCCCCAAC 240	
	PR	15-AUG-1999;	99US-0149361.	Db	340 AGATGGAAACGATGTTAAATGGTTTACCTGGCTCAATCGTGTAAACGGCTACAAAC 399	
	PR	17-AUG-1999;	99US-0149175.	QY	241 TTGCCCCCTCTACTTGTCTCCCTAACAACTAACATGGTGAATGGTCAACCTCTC 300	
	PR	18-AUG-1999;	99US-0149426.	Db	400 TTCTGGCCGCCAAATACGCTTACGGAAATAATGGGTTGGTATACCTCTCT 459	
	PR	20-AUG-1999;	99US-0149723.	QY	301 CAACACTTCCGACATGGCTGAGCTCTGCCTCTCTCAATCCCTCAATACGGCTGGTATC 360	
	PR	20-AUG-1999;	99US-0151066.	Db	460 GAACACITTGACCTCTCACGCTGTTCACGCATCTCTCAGACAGCTGGAATC 519	
	PR	23-AUG-1999;	99US-0151080.	QY	361 GTCCCCGGTCTCTTGTGAGGTACATGATGAAGAAGGTTGGTGGTTAACATC 420	
	PR	25-AUG-1999;	99US-01510566.	Db	520 GTCCTCTTCTACAGAAAGGGTCTCTGGAGGAGAGGATTAAGTCACGATA 579	
	PR	31-AUG-1999;	99US-0151438.	QY	421 AATGGCCACTCATACTCAACTCGTTGATCACAAACTCGGGGCCAGGGACGC 480	
	PR	27-AUG-1999;	99US-0151930.	Db	580 AACGGCCACTCATACTCAACTCGGGGCCAGGGACGCT 639	
	PR	10-SEP-1999;	99US-012363.	QY	481 CACTCTGTGCGATAAAGGGCTCTGCACTGGATGCAATCTCATCTGAGAAATGGGCC 540	
	PR	13-SEP-1999;	99US-0153070.	Db	640 CACTCGGGGATCAAGGGTCAGACGATGTCAGGAACTATGTCAGGAACCTGGGG 699	
	PR	15-SEP-1999;	99US-0153758.	QY	541 CAAACTGGCAAGCACACATACATCACGGCCAGGGCTTCTTCAGTCACCTG 600	
	PR	16-SEP-1999;	99US-0154039.	Db	700 CAAATGGCAAGCACTTACCTTCAGGGTAAAGCACTTCTGACACC 759	
	PR	20-SEP-1999;	99US-0154779.	QY	601 ATGTGAGGTCCACTCTCACTGGCTATAACTCTGCTTCCAACTGGCAATTGGCAA 660	
	PR	22-SEP-1999;	99US-0155139.	Db	760 ACGGACGCCACAGTGTCTCCCTCAACGCCCTCCGCCGCTGGCTTATGCCAG 819	
	PR	23-SEP-1999;	99US-0155486.	QY		
	PR	28-SEP-1999;	99US-0156659.	Db		
	PR	29-SEP-1999;	99US-0156596.	QY		
	PR	04-OCT-1999;	99US-0157117.	Db		
	PR	05-OCT-1999;	99US-0157753.	QY		
	PR	06-OCT-1999;	99US-0157865.	Db		
	PR	07-OCT-1999;	99US-0157869.	QY		
	PR	08-OCT-1999;	99US-015822.	Db		
	PR	12-OCT-1999;	99US-0158369.	QY		
	PR	13-OCT-1999;	99US-0159293.	Db		
	PR	13-OCT-1999;	99US-0159294.	QY		
	PR	13-OCT-1999;	99US-0159295.	Db		
	PR	14-OCT-1999;	99US-0159329.	QY		
	PR	14-OCT-1999;	99US-0159330.	Db		
	PR	14-OCT-1999;	99US-0159337.	QY		
	PR	14-OCT-1999;	99US-0159637.	Db		
	PR	18-OCT-1999;	99US-0159584.	QY		
	PR	18-OCT-1999;	99US-0159584.	Db		



PR	20-AUG-1999;	99US-0149929.	QY
PR	23-AUG-1999;	99US-0149930.	Db
PR	23-AUG-1999;	99US-0150566.	Db
PR	25-AUG-1999;	99US-0150884.	QY
PR	26-AUG-1999;	99US-0151065.	Db
PR	27-AUG-1999;	99US-0151066.	Db
PR	27-AUG-1999;	99US-0151080.	QY
PR	30-AUG-1999;	99US-0151303.	Db
PR	31-AUG-1999;	99US-0151438.	Db
PR	01-SEP-1999;	99US-0151930.	QY
PR	07-SEP-1999;	99US-0152363.	QY
PR	10-SEP-1999;	99US-0153070.	QY
PR	13-SEP-1999;	99US-0153758.	Db
PR	15-SEP-1999;	99US-0154018.	Db
PR	16-SEP-1999;	99US-0154039.	QY
PR	20-SEP-1999;	99US-0154779.	QY
PR	20-SEP-1999;	99US-0155139.	Db
PR	21-SEP-1999;	99US-0155486.	Db
PR	24-SEP-1999;	99US-0155659.	QY
PR	28-SEP-1999;	99US-0156458.	Db
PR	29-SEP-1999;	99US-0156596.	Db
PR	04-OCT-1999;	99US-0157117.	QY
PR	05-OCT-1999;	99US-0157753.	Db
PR	05-OCT-1999;	99US-0157865.	QY
PR	07-OCT-1999;	99US-0158029.	Db
PR	08-OCT-1999;	99US-0158232.	Db
PR	12-OCT-1999;	99US-0158369.	QY
PR	13-OCT-1999;	99US-0159293.	Db
PR	13-OCT-1999;	99US-0159294.	QY
PR	13-OCT-1999;	99US-0159295.	Db
PR	14-OCT-1999;	99US-0159329.	QY
PR	14-OCT-1999;	99US-0159330.	Db
PR	14-OCT-1999;	99US-0159331.	QY
PR	14-OCT-1999;	99US-0159637.	Db
PR	14-OCT-1999;	99US-0159638.	QY
PR	18-OCT-1999;	99US-0159584.	Db
PR	21-OCT-1999;	99US-0160741.	RESULT 9
PR	21-OCT-1999;	99US-0160757.	AAC40169
PR	21-OCT-1999;	99US-0160768.	ID AAC40169
PR	21-OCT-1999;	99US-0160770.	standard; DNA; 1326 BP.
PR	21-OCT-1999;	99US-0160814.	XX
PR	21-OCT-1999;	99US-0160815.	AC AAC40169;
PR	22-OCT-1999;	99US-0160980.	XX
PR	22-OCT-1999;	99US-0160981.	DE Arabidopsis thaliana DNA fragment SEQ ID NO: 27308.
PR	22-OCT-1999;	99US-0160989.	XX
PR	25-OCT-1999;	99US-0161404.	AC
PR	25-OCT-1999;	99US-0161405.	XX
PR	25-OCT-1999;	99US-0161406.	KW hybridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.
PR	26-OCT-1999;	99US-0161359.	XX
PR	26-OCT-1999;	99US-0161360.	OS Arabidopsis thaliana.
PR	26-OCT-1999;	99US-0161361.	XX
PR	28-OCT-1999;	99US-0161920.	PN EP1033405-A2..
PR	28-OCT-1999;	99US-0161992.	XX
PR	28-OCT-1999;	99US-0161993.	PD 06-SEP-2000.
PR	29-OCT-1999;	99US-0162142.	XX
Query Match	52.7%; Score 358.6; DB 21; Length 1324;	PF 25-FEB-2000; 2000EP-0301439.	XX
Best Local Similarity	70.6%; Pred. No. 5e-115;	PR 25-FEB-1999; 99US-0121825.	XX
Matches	478; Conservative 0; Mismatches 199; Indels 0; Gaps 0;	PR 05-MAR-1999; 99US-0123180.	PR
Qy	5 ACGGTGGCGGAGAGGCCAGGCCACCTTTATGGGGTGTGGAGCATCTGGCACCA 64	PR 05-MAR-1999; 99US-012348.	PR
Db	166 ACGGTGGCGGAGAGGCCAGGCCACCTTTATGGGGTGTGGAGCATCTGGCACCA 225	PR 23-MAR-1999; 99US-0125788.	PR
Qy	65 TGGGGAACTGGGGATTATAACGCCAAGGGATGGACACGGGTG 124	PR 25-MAR-1999; 99US-0126264.	PR
Db	226 TGGGGAACTGGGGATTATAACGCCAAGGGATGGACACGGGTG 285	PR 29-MAR-1999; 99US-0126785.	PR
Qy	125 CGCTGAGCCTGGCTATTAACATGGATTAGTGGTGTGGCTGTCGAATGACTT 184	PR 01-APR-1999; 99US-0127462.	PR
Db	286 CGTGTGAGCAGCTGCCTGTCACACACGGCTTAGCTGGGGCTGTGTTGAGATCAAGT 345	PR 05-APR-1999; 99US-0128234.	PR
Qy		PR 05-APR-1999; 99US-0128714.	PR
Db		PR 16-APR-1999; 99US-0129845.	PR
Qy		PR 19-APR-1999; 99US-0130077.	PR
Db		PR 21-APR-1999; 99US-0130449.	PR
Qy		PR 23-APR-1999; 99US-0130510.	PR
Db		PR 23-APR-1999; 99US-0130891.	PR

PR 28-APR-1999; 99US-0131449. PR 21-JUL-1999; 99US-0148814.  
 PR 30-APR-1999; 99US-0132048. PR 21-JUL-1999; 99US-0145886.  
 PR 04-MAY-1999; 99US-0132407. PR 21-JUL-1999; 99US-0145088.  
 PR 05-MAY-1999; 99US-0132485. PR 22-JUL-1999; 99US-0145085.  
 PR 06-MAY-1999; 99US-0132486. PR 22-JUL-1999; 99US-0145087.  
 PR 06-MAY-1999; 99US-0132487. PR 22-JUL-1999; 99US-0145089.  
 PR 07-MAY-1999; 99US-0132651. PR 22-JUL-1999; 99US-0145192.  
 PR 11-MAY-1999; 99US-0134256. PR 23-JUL-1999; 99US-0145145.  
 PR 14-MAY-1999; 99US-0134218. PR 23-JUL-1999; 99US-0145145.  
 PR 14-MAY-1999; 99US-0134219. PR 23-JUL-1999; 99US-014518.  
 PR 14-MAY-1999; 99US-0134221. PR 23-JUL-1999; 99US-014518.  
 PR 14-MAY-1999; 99US-0134221. PR 23-JUL-1999; 99US-014518.  
 PR 18-MAY-1999; 99US-0134768. PR 23-JUL-1999; 99US-014518.  
 PR 19-MAY-1999; 99US-0134941. PR 23-JUL-1999; 99US-014518.  
 PR 20-MAY-1999; 99US-0135124. PR 23-JUL-1999; 99US-014518.  
 PR 21-MAY-1999; 99US-0135353. PR 26-JUL-1999; 99US-0145224.  
 PR 24-MAY-1999; 99US-0135629. PR 26-JUL-1999; 99US-0145276.  
 PR 22-MAY-1999; 99US-0136021. PR 27-JUL-1999; 99US-0145913.  
 PR 27-MAY-1999; 99US-0136932. PR 27-JUL-1999; 99US-0145918.  
 PR 28-MAY-1999; 99US-0136782. PR 28-JUL-1999; 99US-0145919.  
 PR 01-JUN-1999; 99US-0137222. PR 02-AUG-1999; 99US-0146386.  
 PR 03-JUN-1999; 99US-0137528. PR 02-AUG-1999; 99US-0146388.  
 PR 04-JUN-1999; 99US-0137502. PR 02-AUG-1999; 99US-0146389.  
 PR 07-JUN-1999; 99US-0137754. PR 03-AUG-1999; 99US-0147038.  
 PR 08-JUN-1999; 99US-0138094. PR 04-AUG-1999; 99US-0147204.  
 PR 10-JUN-1999; 99US-0138540. PR 04-AUG-1999; 99US-0147302.  
 PR 10-JUN-1999; 99US-0138847. PR 05-AUG-1999; 99US-0147192.  
 PR 14-JUN-1999; 99US-0139119. PR 05-AUG-1999; 99US-0147260.  
 PR 16-JUN-1999; 99US-0139452. PR 06-AUG-1999; 99US-0147303.  
 PR 16-JUN-1999; 99US-0139453. PR 06-AUG-1999; 99US-0147416.  
 PR 17-JUN-1999; 99US-0139452. PR 09-AUG-1999; 99US-0147493.  
 PR 18-JUN-1999; 99US-0139454. PR 09-AUG-1999; 99US-0147935.  
 PR 18-JUN-1999; 99US-0139455. PR 10-AUG-1999; 99US-0148171.  
 PR 18-JUN-1999; 99US-0139455. PR 11-AUG-1999; 99US-0148219.  
 PR 18-JUN-1999; 99US-0139457. PR 12-AUG-1999; 99US-0148341.  
 PR 18-JUN-1999; 99US-0139458. PR 13-AUG-1999; 99US-0148565.  
 PR 18-JUN-1999; 99US-0139459. PR 13-AUG-1999; 99US-0148684.  
 PR 18-JUN-1999; 99US-0139460. PR 16-AUG-1999; 99US-0149368.  
 PR 18-JUN-1999; 99US-0139461. PR 16-AUG-1999; 99US-0149375.  
 PR 18-JUN-1999; 99US-0139462. PR 17-AUG-1999; 99US-0149376.  
 PR 18-JUN-1999; 99US-0139463. PR 18-AUG-1999; 99US-0149377.  
 PR 18-JUN-1999; 99US-0139750. PR 20-AUG-1999; 99US-0149377.  
 PR 18-JUN-1999; 99US-0139753. PR 20-AUG-1999; 99US-0149377.  
 PR 21-JUN-1999; 99US-0139817. PR 23-AUG-1999; 99US-0149902.  
 PR 22-JUN-1999; 99US-0139899. PR 23-AUG-1999; 99US-0149930.  
 PR 23-JUN-1999; 99US-0140353. PR 25-AUG-1999; 99US-0150566.  
 PR 23-JUN-1999; 99US-0140354. PR 26-AUG-1999; 99US-0149322.  
 PR 24-JUN-1999; 99US-0140695. PR 26-AUG-1999; 99US-0149322.  
 PR 26-JUN-1999; 99US-0140823. PR 27-AUG-1999; 99US-0149929.  
 PR 29-JUN-1999; 99US-0140991. PR 27-AUG-1999; 99US-0149929.  
 PR 30-JUN-1999; 99US-0141287. PR 30-AUG-1999; 99US-0151303.  
 PR 01-JUL-1999; 99US-0141842. PR 31-AUG-1999; 99US-0151438.  
 PR 01-JUL-1999; 99US-0142154. PR 01-SEP-1999; 99US-0151930.  
 PR 13-JUL-1999; 99US-0144331. PR 01-SEP-1999; 99US-0151930.  
 PR 02-JUL-1999; 99US-0142055. PR 07-SEP-1999; 99US-0152363.  
 PR 06-JUL-1999; 99US-0142390. PR 10-SEP-1999; 99US-0153070.  
 PR 08-JUL-1999; 99US-0144005. PR 13-SEP-1999; 99US-0153758.  
 PR 16-JUL-1999; 99US-0144280. PR 15-SEP-1999; 99US-0154018.  
 PR 09-JUL-1999; 99US-01442920. PR 15-SEP-1999; 99US-0154039.  
 PR 12-JUL-1999; 99US-01442977. PR 20-SEP-1999; 99US-0154779.  
 PR 13-JUL-1999; 99US-0144332. PR 07-SEP-1999; 99US-0155139.  
 PR 14-JUL-1999; 99US-0144333. PR 23-SEP-1999; 99US-0155486.  
 PR 16-JUL-1999; 99US-0144405. PR 24-SEP-1999; 99US-0155659.  
 PR 19-JUL-1999; 99US-01444335. PR 28-SEP-1999; 99US-0155458.  
 PR 20-JUL-1999; 99US-01444352. PR 29-SEP-1999; 99US-0155956.  
 PR 20-JUL-1999; 99US-01444352. PR 04-OCT-1999; 99US-0157117.  
 PR 19-JUL-1999; 99US-01444333. PR 22-SEP-1999; 99US-0157139.  
 PR 19-JUL-1999; 99US-01444334. PR 23-SEP-1999; 99US-0157139.  
 PR 19-JUL-1999; 99US-01444335. PR 07-OCT-1999; 99US-0158029.  
 PR 19-JUL-1999; 99US-01444086. PR 08-OCT-1999; 99US-0158232.  
 PR 14-OCT-1999; 99US-0159331. PR 12-OCT-1999; 99US-0158369.  
 PR 14-OCT-1999; 99US-0159637. PR 13-OCT-1999; 99US-0158293.  
 PR 14-OCT-1999; 99US-0159638. PR 13-OCT-1999; 99US-0159294.  
 PR 14-OCT-1999; 99US-0159329. PR 13-OCT-1999; 99US-0159329.  
 PR 14-OCT-1999; 99US-0159331. PR 14-OCT-1999; 99US-0159331.  
 PR 14-OCT-1999; 99US-0159637. PR 14-OCT-1999; 99US-0159637.

PR	18-OCT-1999;	99US-0159584.
PR	21-OCT-1999;	99US-0160741.
PR	21-OCT-1999;	99US-0150767.
PR	21-OCT-1999;	99US-0160768.
PR	21-OCT-1999;	99US-0160770.
PR	21-OCT-1999;	99US-0160814.
PR	21-OCT-1999;	99US-0160815.
PR	22-OCT-1999;	99US-0160880.
PR	22-OCT-1999;	99US-0160881.
PR	22-OCT-1999;	99US-0160889.
PR	25-OCT-1999;	99US-016104.
PR	25-OCT-1999;	99US-0161405.
PR	25-OCT-1999;	99US-0161406.
PR	26-OCT-1999;	99US-0161559.
PR	26-OCT-1999;	99US-0161560.
PR	26-OCT-1999;	99US-0161561.
PR	28-OCT-1999;	99US-0161920.
PR	28-OCT-1999;	99US-0161992.
PR	28-OCT-1999;	99US-0161993.
PR	29-OCT-1999;	99US-0162142.
<hr/>		
	RESULT 10	
	AAC47991	ID AAC47991 standard; DNA; 1366 BP.
	XX	XX
	AC	AC AAC47991;
	XX	XX
	DT	18-OCT-2000 (first entry)
	XX	XX
	DE	Arabidopsis thaliana DNA fragment SEQ ID NO: 55864.
	XX	XX
	KW	Hybridisation assay; genetic mapping; gene expression control;
	KW	protein identification; signal transduction pathway;
	KW	metabolic pathway; promoter; termination sequence; ss.
	XX	XX
	OS	Arabidopsis thaliana.
	XX	XX
	PN	EP1033405-A2.
	XX	XX
	PD	06-SEP-2000.
	xx	

Query	Match	Score	DB	Length
PR	18-JUN-1999;	990S-0139458.	PR	20-AUG-1999;
PR	18-JUN-1999;	990S-0139459.	PR	20-AUG-1999;
PR	18-JUN-1999;	990S-0139460.	PR	23-AUG-1999;
PR	18-JUN-1999;	990S-0139461.	PR	23-AUG-1999;
PR	18-JUN-1999;	990S-0139462.	PR	25-AUG-1999;
PR	18-JUN-1999;	990S-0139463.	PR	26-AUG-1999;
PR	18-JUN-1999;	990S-0139750.	PR	27-AUG-1999;
PR	18-JUN-1999;	990S-0139763.	PR	27-AUG-1999;
PR	21-JUN-1999;	990S-0139817.	PR	27-AUG-1999;
PR	22-JUN-1999;	990S-0139899.	PR	30-AUG-1999;
PR	23-JUN-1999;	990S-0140353.	PR	31-AUG-1999;
PR	23-JUN-1999;	990S-0140354.	PR	01-SEP-1999;
PR	24-JUN-1999;	990S-0140695.	PR	07-SEP-1999;
PR	28-JUN-1999;	990S-0140823.	PR	10-SEP-1999;
PR	29-JUN-1999;	990S-0140991.	PR	13-SEP-1999;
PR	30-JUN-1999;	990S-0141287.	PR	15-SEP-1999;
PR	01-JUL-1999;	990S-0141842.	PR	16-SEP-1999;
PR	01-JUL-1999;	990S-0142154.	PR	20-SEP-1999;
PR	02-JUL-1999;	990S-0142055.	PR	22-SEP-1999;
PR	06-JUL-1999;	990S-0142390.	PR	23-SEP-1999;
PR	08-JUL-1999;	990S-0142803.	PR	24-SEP-1999;
PR	09-JUL-1999;	990S-0142920.	PR	28-SEP-1999;
PR	12-JUL-1999;	990S-0142977.	PR	29-SEP-1999;
PR	13-JUL-1999;	990S-0143154.	PR	04-OCT-1999;
PR	14-JUL-1999;	990S-0143624.	PR	05-OCT-1999;
PR	15-JUL-1999;	990S-0144005.	PR	06-OCT-1999;
PR	16-JUL-1999;	990S-0144085.	PR	07-OCT-1999;
PR	19-JUL-1999;	990S-0144086.	PR	08-OCT-1999;
PR	19-JUL-1999;	990S-0144325.	PR	12-OCT-1999;
PR	19-JUL-1999;	990S-0144331.	PR	13-OCT-1999;
PR	19-JUL-1999;	990S-0144332.	PR	13-OCT-1999;
PR	19-JUL-1999;	990S-0144333.	PR	13-OCT-1999;
PR	20-JUL-1999;	990S-0144334.	PR	14-OCT-1999;
PR	20-JUL-1999;	990S-0144352.	PR	14-OCT-1999;
PR	20-JUL-1999;	990S-0144632.	PR	14-OCT-1999;
PR	20-JUL-1999;	990S-0144884.	PR	14-OCT-1999;
PR	21-JUL-1999;	990S-0144981.	PR	18-OCT-1999;
PR	21-JUL-1999;	990S-0145086.	PR	21-OCT-1999;
PR	21-JUL-1999;	990S-0145088.	PR	21-OCT-1999;
PR	22-JUL-1999;	990S-0145085.	PR	21-OCT-1999;
PR	22-JUL-1999;	990S-0145224.	PR	21-OCT-1999;
PR	22-JUL-1999;	990S-0145276.	PR	21-OCT-1999;
PR	22-JUL-1999;	990S-0145192.	PR	21-OCT-1999;
PR	23-JUL-1999;	990S-0145145.	PR	22-OCT-1999;
PR	23-JUL-1999;	990S-0145218.	PR	22-OCT-1999;
PR	23-JUL-1999;	990S-0145224.	PR	22-OCT-1999;
PR	26-JUL-1999;	990S-0145276.	PR	25-OCT-1999;
PR	27-JUL-1999;	990S-0145912.	PR	25-OCT-1999;
PR	27-JUL-1999;	990S-0145918.	PR	25-OCT-1999;
PR	28-JUL-1999;	990S-0145919.	PR	26-OCT-1999;
PR	02-AUG-1999;	990S-0145951.	PR	26-OCT-1999;
PR	02-AUG-1999;	990S-0146386.	PR	26-OCT-1999;
PR	02-AUG-1999;	990S-0146388.	PR	28-OCT-1999;
PR	03-AUG-1999;	990S-0147308.	PR	28-OCT-1999;
PR	04-AUG-1999;	990S-0147204.	PR	28-OCT-1999;
PR	04-AUG-1999;	990S-0147303.	PR	29-OCT-1999;
PR	05-AUG-1999;	990S-0147192.		
PR	06-AUG-1999;	990S-0147260.		
PR	09-AUG-1999;	990S-0147476.		
PR	09-AUG-1999;	990S-0147493.		
PR	10-AUG-1999;	990S-0147935.		
PR	11-AUG-1999;	990S-0148171.		
PR	12-AUG-1999;	990S-0148319.		
PR	13-AUG-1999;	990S-0148311.		
PR	13-AUG-1999;	990S-0148565.		
PR	16-AUG-1999;	990S-0148694.		
PR	16-AUG-1999;	990S-0149660.		
PR	17-AUG-1999;	990S-0149175.		
PR	18-AUG-1999;	990S-0149426.		
PR	20-AUG-1999;	990S-0149522.		

Query Match Best Local Similarity 51.6%; Score 351.4; DB 21; Length 1366; Matches 477; Conservative 71.1%; Pred. No. 1.7e-112; Mismatches 1; Indels 1; Gaps 1;

QY 7 GGTGGCTGGAGAGGGCCCGGCCACCTTATGGTGGTGAGCAGCTGGGACCATG 66  
Db 271 GGAGGTTGGCTCAAGGCACATTCATCGGGTGGTGTGCTCSCCACATG 330  
Qy 67 GGTGGAGCTGGGATAGGAATTACGCCAGGATATGCCAACGGTGGCG 126  
Db 331 GGAGGTTGGCTGGATACGCCAACGCTTACGGTGGTGTGCTCSCCACATG 390  
Qy 127 CTGAGCACTGGCTATTACAATGGTAAAGTGGTGGCTGCTGCAAGTACTG 186  
Db 391 CTAAGCACGGCTCTATCAATAATGGCTAAGTGGTGGCTGCTGAGATAAGT 450

QY 187 ACAAACGACCTAATGGTGCTTCGGGAACATTAGGGTCACGCCACCACTTGC 245  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 Db 451 CARAACGATGGAAATGGTGTCTCCGTGTCATATGTCGTCACAGCCACAACTTGC 510  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 QY 247 CCTCTTAACTTGTCCTCCCTAACACAATGGTGTGGTCAACGCTCCTCTCACAC 305  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 Db 511 CCTCTTAACACAACGCCATTACGGACAAACGGAGGGTTGGTACCCCTCCCTACAGCAT 570  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 QY 307 TTGACATGGCTGAGCTGCCCTCTCAATCGCTAACACGGCTGGTATCTCCC 365  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 Db 571 TTGATCTCTCAGGCCATTACGCTCAATACGCTAACAGCCGCTGTCACAGGGCATGCCCC 630  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 QY 367 GTCCTCTTTCGTTAGGGTACCATGATGAGAAGGAGGAGGTTACATCATGGC 426  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 Db 631 GTCGCTTACCGGAGAGGCCGTTGGCTGAGAAGGAGGAAT-ACGTTACGATAACGGA 689  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 QY 427 CACTCAACTTCAACCCTGTTGATCACAAACGTCGGTGGCCAGGGACTCT 486  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 Db 690 CACTCTTACTTCAACCTGTTGATCACAAACGTCGGTGGCCAGGGACTCT 749  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 QY 487 GTGTCGATAAAGGGTCTGAACTGGGATGAGGAACTGGGCAAAAC 545  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 Db 750 GCGATGTTAACGTTAAGGTTCAAGAACATGTCGAGGAGGAACTGGGCAAAAC 809  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 QY 547 TGGCAAAGCACACTCTCAATGGCCAAGGCCCTTCCTCAACTCTTAGTAT 605  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 Db 810 TGGCAGACTTACACTCTTACCTTACAGTCATCACAGTCACACAAAGC 869  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 QY 607 GGTGCACTCTCACTSGCTATATCTCGTTCTCAATTGGCAATTGGCCAAAC 665  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 Db 870 GGCCAAACCATGTCCTAACACAGCTGGCTTGGCCAGACCTC 929  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 QY 667 GAGGCCCTCA 677  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
 Db 930 ACGGTGGCA 940  
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  
  
 RESULT 11  
 AAC45165 ID AAC45165 standard; DNA; 1212 BP.  
 XX AC AAC45165;  
 XX DT 18-OCT-2000 (first entry)  
 DE Arabidopsis thaliana DNA fragment SEQ ID NO: 45533.  
 XX KW Hybridisation assay; genetic mapping; gene expression control; protein identification assay; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.  
 OS Arabidopsis thaliana.  
 XX PN EP1033405-A2.  
 XX PD 06-SEP-2000.  
 XX PF 25-FEB-2000; 2000EP-0301439.  
 XX PR 05-MAR-1999; 99US-0123180.  
 PR 09-MAR-1999; 99US-0123548.  
 PR 23-MAR-1999; 99US-0125788.  
 PR 25-MAR-1999; 99US-0126264.  
 PR 29-MAR-1999; 99US-0126785.  
 PR 01-APR-1999; 99US-0127462.  
 PR 06-APR-1999; 99US-0128234.  
 PR 08-APR-1999; 99US-0128714.  
 PR 16-APR-1999; 99US-0129845.  
 PR 19-APR-1999; 99US-0130077.  
 PR 21-APR-1999; 99US-0130449.  
 PR 23-APR-1999; 99US-0130510.  
  
 PR 23-APR-1999; 99US-0130891.  
 PR 28-APR-1999; 99US-0131449.  
 PR 30-APR-1999; 99US-0132048.  
 PR 04-MAY-1999; 99US-0132484.  
 PR 06-MAY-1999; 99US-0132486.  
 PR 07-MAY-1999; 99US-0132487.  
 PR 11-MAY-1999; 99US-0134256.  
 PR 14-MAY-1999; 99US-0134218.  
 PR 14-MAY-1999; 99US-0134221.  
 PR 14-MAY-1999; 99US-0134370.  
 PR 18-MAY-1999; 99US-0134768.  
 PR 19-MAY-1999; 99US-0134941.  
 PR 20-MAY-1999; 99US-0135124.  
 PR 24-MAY-1999; 99US-0135353.  
 PR 25-MAY-1999; 99US-0136021.  
 PR 28-MAY-1999; 99US-0136782.  
 PR 01-JUN-1999; 99US-0137222.  
 PR 04-JUN-1999; 99US-0137502.  
 PR 07-JUN-1999; 99US-0137724.  
 PR 08-JUN-1999; 99US-0138094.  
 PR 10-JUN-1999; 99US-0138540.  
 PR 10-JUN-1999; 99US-0138847.  
 PR 14-JUN-1999; 99US-0139119.  
 PR 16-JUN-1999; 99US-0139452.  
 PR 16-JUN-1999; 99US-0139453.  
 PR 17-JUN-1999; 99US-0139492.  
 PR 18-JUN-1999; 99US-0139455.  
 PR 18-JUN-1999; 99US-0139456.  
 PR 18-JUN-1999; 99US-0139457.  
 PR 18-JUN-1999; 99US-0139459.  
 PR 18-JUN-1999; 99US-0139460.  
 PR 18-JUN-1999; 99US-0139461.  
 PR 18-JUN-1999; 99US-0139462.  
 PR 18-JUN-1999; 99US-0139463.  
 PR 18-JUN-1999; 99US-0139464.  
 PR 18-JUN-1999; 99US-0139465.  
 PR 18-JUN-1999; 99US-0139466.  
 PR 21-JUN-1999; 99US-0139817.  
 PR 22-JUN-1999; 99US-0139899.  
 PR 23-JUN-1999; 99US-0140353.  
 PR 23-JUN-1999; 99US-0140354.  
 PR 24-JUN-1999; 99US-0140695.  
 PR 28-JUN-1999; 99US-0140823.  
 PR 29-JUN-1999; 99US-0140991.  
 PR 30-JUN-1999; 99US-0141287.  
 PR 01-JUL-1999; 99US-0141842.  
 PR 01-JUL-1999; 99US-0142154.  
 PR 02-JUL-1999; 99US-0142055.  
 PR 06-JUL-1999; 99US-0142390.  
 PR 08-JUL-1999; 99US-0142803.  
 PR 09-JUL-1999; 99US-0142920.  
 PR 12-JUL-1999; 99US-0142977.  
 PR 13-JUL-1999; 99US-0143542.  
 PR 14-JUL-1999; 99US-0143624.  
 PR 08-JUL-1999; 99US-0144055.  
 PR 15-JUL-1999; 99US-0144085.  
 PR 16-JUL-1999; 99US-0144086.  
 PR 16-JUL-1999; 99US-0144086.  
 PR 19-JUL-1999; 99US-0144335.  
 PR 19-JUL-1999; 99US-0144335.  
 PR 20-JUL-1999; 99US-0144352.

	PR	20-JUL-1999; 99US-0144884.	PR	14-OCT-1999; 99US-0159638.
	PR	21-JUL-1999; 99US-0144814.	PR	18-OCT-1999; 99US-0159584.
	PR	21-JUL-1999; 99US-0145086.	PR	21-OCT-1999; 99US-0160741.
	PR	22-JUL-1999; 99US-0145088.	PR	21-OCT-1999; 99US-0160767.
	PR	22-JUL-1999; 99US-0145085.	PR	21-OCT-1999; 99US-0160768.
	PR	22-JUL-1999; 99US-0145087.	PR	21-OCT-1999; 99US-0160770.
	PR	22-JUL-1999; 99US-0145089.	PR	21-OCT-1999; 99US-0160814.
	PR	22-JUL-1999; 99US-0145192.	PR	21-OCT-1999; 99US-0160815.
	PR	23-JUL-1999; 99US-0145145.	PR	22-OCT-1999; 99US-0160810.
	PR	23-JUL-1999; 99US-0145218.	PR	22-OCT-1999; 99US-0160811.
	PR	23-JUL-1999; 99US-0145224.	PR	22-OCT-1999; 99US-0160812.
	PR	26-JUL-1999; 99US-0145276.	PR	25-OCT-1999; 99US-0161404.
	PR	27-JUL-1999; 99US-0145913.	PR	25-OCT-1999; 99US-0161405.
	PR	27-JUL-1999; 99US-0145918.	PR	25-OCT-1999; 99US-0161406.
	PR	27-JUL-1999; 99US-0145919.	PR	26-OCT-1999; 99US-0161359.
	PR	28-JUL-1999; 99US-0145951.	PR	26-OCT-1999; 99US-0161350.
	PR	02-AUG-1999; 99US-0146386.	PR	26-OCT-1999; 99US-0161361.
	PR	02-AUG-1999; 99US-0146388.	PR	28-OCT-1999; 99US-0161920.
	PR	02-AUG-1999; 99US-0146389.	PR	28-OCT-1999; 99US-0161921.
	PR	03-AUG-1999; 99US-0147030.	PR	28-OCT-1999; 99US-0161922.
	PR	04-AUG-1999; 99US-0147204.	PR	29-OCT-1999; 99US-0161942.
	PR	05-AUG-1999; 99US-0147302.	PR	29-OCT-1999; 99US-0161942.
	PR	05-AUG-1999; 99US-0147303.	PR	29-OCT-1999; 99US-0161942.
	PR	06-AUG-1999; 99US-0147416.	PR	29-OCT-1999; 99US-0161942.
	PR	09-AUG-1999; 99US-0147493.	PR	29-OCT-1999; 99US-0161942.
	PR	09-AUG-1999; 99US-0147935.	PR	29-OCT-1999; 99US-0161942.
	PR	10-AUG-1999; 99US-01480171.	PR	29-OCT-1999; 99US-0161942.
	PR	11-AUG-1999; 99US-0148119.	PR	29-OCT-1999; 99US-0161942.
	PR	12-AUG-1999; 99US-0148341.	PR	29-OCT-1999; 99US-0161942.
	PR	12-AUG-1999; 99US-0148565.	PR	29-OCT-1999; 99US-0161942.
	PR	13-AUG-1999; 99US-0148884.	PR	29-OCT-1999; 99US-0161942.
	PR	16-AUG-1999; 99US-0149368.	PR	29-OCT-1999; 99US-0161942.
	PR	17-AUG-1999; 99US-0149175.	PR	29-OCT-1999; 99US-0161942.
	PR	18-AUG-1999; 99US-0149426.	PR	29-OCT-1999; 99US-0161942.
	PR	20-AUG-1999; 99US-0149722.	PR	29-OCT-1999; 99US-0161942.
	PR	20-AUG-1999; 99US-0149929.	PR	29-OCT-1999; 99US-0161942.
	PR	23-AUG-1999; 99US-0149902.	PR	29-OCT-1999; 99US-0161942.
	PR	23-AUG-1999; 99US-0149930.	PR	29-OCT-1999; 99US-0161942.
	PR	25-AUG-1999; 99US-0150566.	PR	29-OCT-1999; 99US-0161942.
	PR	26-AUG-1999; 99US-0150884.	PR	29-OCT-1999; 99US-0161942.
	PR	27-AUG-1999; 99US-0151066.	PR	29-OCT-1999; 99US-0161942.
	PR	27-AUG-1999; 99US-0151080.	PR	29-OCT-1999; 99US-0161942.
	PR	13-SEP-1999; 99US-0151303.	PR	29-OCT-1999; 99US-0161942.
	PR	31-AUG-1999; 99US-0151438.	PR	29-OCT-1999; 99US-0161942.
	PR	01-SEP-1999; 99US-0151330.	PR	29-OCT-1999; 99US-0161942.
	PR	10-SEP-1999; 99US-0152070.	PR	29-OCT-1999; 99US-0161942.
	PR	13-SEP-1999; 99US-0153758.	PR	29-OCT-1999; 99US-0161942.
	PR	15-SEP-1999; 99US-0154018.	PR	29-OCT-1999; 99US-0161942.
	PR	16-SEP-1999; 99US-0154039.	PR	29-OCT-1999; 99US-0161942.
	PR	20-SEP-1999; 99US-0154779.	PR	29-OCT-1999; 99US-0161942.
	PR	22-SEP-1999; 99US-0155139.	PR	29-OCT-1999; 99US-0161942.
	PR	23-SEP-1999; 99US-0155486.	PR	29-OCT-1999; 99US-0161942.
	PR	24-SEP-1999; 99US-0156029.	PR	29-OCT-1999; 99US-0161942.
	PR	08-OCT-1999; 99US-0158332.	PR	29-OCT-1999; 99US-0161942.
	PR	12-OCT-1999; 99US-0158369.	PR	29-OCT-1999; 99US-0161942.
	PR	13-OCT-1999; 99US-0159393.	PR	29-OCT-1999; 99US-0161942.
	PR	13-OCT-1999; 99US-0157753.	PR	29-OCT-1999; 99US-0161942.
	PR	06-OCT-1999; 99US-0157865.	PR	29-OCT-1999; 99US-0161942.
	PR	07-OCT-1999; 99US-0158029.	PR	29-OCT-1999; 99US-0161942.
	PR	08-OCT-1999; 99US-0158332.	PR	29-OCT-1999; 99US-0161942.
	PR	14-OCT-1999; 99US-0159329.	PR	29-OCT-1999; 99US-0161942.
	PR	14-OCT-1999; 99US-0159330.	PR	29-OCT-1999; 99US-0161942.
	PR	14-OCT-1999; 99US-0159331.	PR	29-OCT-1999; 99US-0161942.
	PR	14-OCT-1999; 99US-0159637.	PR	29-OCT-1999; 99US-0161942.

	PR	14-OCT-1999; 99US-0159638.	PR	18-OCT-1999; 99US-0159584.
	PR	21-OCT-1999; 99US-0160741.	PR	21-OCT-1999; 99US-0160741.
	PR	21-OCT-1999; 99US-0160767.	PR	21-OCT-1999; 99US-0160767.
	PR	21-OCT-1999; 99US-0160768.	PR	21-OCT-1999; 99US-0160768.
	PR	21-OCT-1999; 99US-0160814.	PR	21-OCT-1999; 99US-0160814.
	PR	21-OCT-1999; 99US-0160815.	PR	21-OCT-1999; 99US-0160815.
	PR	22-OCT-1999; 99US-016080.	PR	22-OCT-1999; 99US-016080.
	PR	22-OCT-1999; 99US-016081.	PR	22-OCT-1999; 99US-016081.
	PR	22-OCT-1999; 99US-016089.	PR	22-OCT-1999; 99US-016089.
	PR	25-OCT-1999; 99US-0161404.	PR	25-OCT-1999; 99US-0161404.
	PR	25-OCT-1999; 99US-0161405.	PR	25-OCT-1999; 99US-0161405.
	PR	25-OCT-1999; 99US-0161406.	PR	25-OCT-1999; 99US-0161406.
	PR	26-OCT-1999; 99US-0161359.	PR	26-OCT-1999; 99US-0161359.
	PR	26-OCT-1999; 99US-0161360.	PR	26-OCT-1999; 99US-0161360.
	PR	26-OCT-1999; 99US-0161361.	PR	26-OCT-1999; 99US-0161361.
	PR	28-OCT-1999; 99US-0161920.	PR	28-OCT-1999; 99US-0161920.
	PR	28-OCT-1999; 99US-0161921.	PR	28-OCT-1999; 99US-0161921.
	PR	28-OCT-1999; 99US-0161922.	PR	28-OCT-1999; 99US-0161922.
	PR	29-OCT-1999; 99US-0161942.	PR	29-OCT-1999; 99US-0161942.

RESULT 12  
 AAC44930 standard; DNA; 1319 BP.  
 XX  
 AC  
 XX  
 AAC44930;  
 XX  
 DT 18-OCT-2000 (first entry)  
 DE Arabidopsis thaliana DNA fragment SEQ ID NO: 44664.  
 KW Hybridisation assay; genetic mapping; gene expression control;  
 protein identification; signal transduction pathway;  
 metabolic pathway; promoter; termination sequence; ss.  
 XX OS Arabidopsis thaliana.  
 PN XX EP1033405-A2.  
 XX PD 06-SEP-2000.  
 XX PF 25-FEB-2000; 2000EP-0301439.  
 XX PR 25-FEB-1999; 99US-0121825.  
 PR 05-MAR-1999; 99US-0123180.  
 PR 09-MAR-1999; 99US-0123548.  
 PR 22-MAR-1999; 99US-0125788.  
 PR 25-MAR-1999; 99US-0126265.  
 PR 29-MAR-1999; 99US-0126785.  
 PR 01-APR-1999; 99US-0127462.  
 PR 06-APR-1999; 99US-0128332.  
 PR 08-APR-1999; 99US-0128714.  
 PR 16-APR-1999; 99US-0129845.  
 PR 19-APR-1999; 99US-0130077.  
 PR 21-APR-1999; 99US-0130447.  
 PR 23-APR-1999; 99US-0130510.  
 PR 23-APR-1999; 99US-0130931.  
 PR 28-APR-1999; 99US-0131449.  
 PR 30-APR-1999; 99US-0132048.  
 PR 30-APR-1999; 99US-0132407.  
 PR 04-MAY-1999; 99US-0132484.  
 PR 05-MAY-1999; 99US-0132485.  
 PR 06-MAY-1999; 99US-0132487.  
 PR 07-MAY-1999; 99US-0132863.  
 PR 11-MAY-1999; 99US-0134255.  
 PR 14-MAY-1999; 99US-0134258.  
 PR 14-MAY-1999; 99US-0134219.  
 PR 14-MAY-1999; 99US-0134221.  
 PR 14-MAY-1999; 99US-0134370.  
 PR 18-MAY-1999; 99US-0134768.  
 PR 19-MAY-1999; 99US-0134941.  
 PR 20-MAY-1999; 99US-0135124.  
 PR 21-MAY-1999; 99US-0135353.  
 PR 24-MAY-1999; 99US-0135629.  
 PR 25-MAY-1999; 99US-0136021.  
 PR 27-MAY-1999; 99US-0136393.  
 PR 28-MAY-1999; 99US-0136782.  
 PR 01-JUN-1999; 99US-0137222.  
 PR 03-JUN-1999; 99US-0137528.  
 PR 04-JUN-1999; 99US-0137502.  
 PR 07-JUN-1999; 99US-0137724.  
 PR 08-JUN-1999; 99US-0138094.  
 PR 10-JUN-1999; 99US-0138540.  
 PR 10-JUN-1999; 99US-0138847.  
 PR 14-JUN-1999; 99US-0139118.  
 PR 16-JUN-1999; 99US-0139452.  
 PR 17-JUN-1999; 99US-0139453.  
 PR 18-JUN-1999; 99US-0139492.  
 PR 18-JUN-1999; 99US-0139454.  
 PR 18-JUN-1999; 99US-0139455.  
 PR 18-JUN-1999; 99US-0139456.

PR	18-JUN-1999;	99US-0139457.
PR	18-JUN-1999;	99US-0139458.
PR	18-JUN-1999;	99US-0139459.
PR	18-JUN-1999;	99US-0139460.
PR	18-JUN-1999;	99US-0139461.
PR	18-JUN-1999;	99US-0139462.
PR	18-JUN-1999;	99US-0139463.
PR	18-JUN-1999;	99US-0139750.
PR	18-JUN-1999;	99US-0139817.
PR	21-JUN-1999;	99US-0139817.
PR	22-JUN-1999;	99US-0139899.
PR	23-JUN-1999;	99US-0140353.
PR	02-JUL-1999;	99US-0142055.
PR	06-JUL-1999;	99US-0142390.
PR	08-JUL-1999;	99US-0142803.
PR	09-JUL-1999;	99US-0142920.
PR	12-JUL-1999;	99US-0142977.
PR	13-JUL-1999;	99US-0143542.
PR	14-JUL-1999;	99US-0143624.
PR	15-JUL-1999;	99US-0144005.
PR	16-JUL-1999;	99US-0144085.
PR	16-JUL-1999;	99US-0144086.
PR	19-JUL-1999;	99US-0144325.
PR	19-JUL-1999;	99US-0144331.
PR	19-JUL-1999;	99US-0144332.
PR	19-JUL-1999;	99US-0144333.
PR	19-JUL-1999;	99US-0144334.
PR	19-JUL-1999;	99US-0144335.
PR	20-JUL-1999;	99US-0144352.
PR	20-JUL-1999;	99US-0144632.
PR	20-JUL-1999;	99US-0144884.
PR	21-JUL-1999;	99US-0144814.
PR	21-JUL-1999;	99US-0145086.
PR	21-JUL-1999;	99US-0145088.
PR	22-JUL-1999;	99US-0145089.
PR	22-JUL-1999;	99US-0145087.
PR	22-JUL-1999;	99US-0145089.
PR	22-JUL-1999;	99US-0145192.
PR	23-JUL-1999;	99US-0145145.
PR	23-JUL-1999;	99US-0145218.
PR	23-JUL-1999;	99US-0145085.
PR	23-JUL-1999;	99US-0145352.
PR	26-JUL-1999;	99US-0145276.
PR	27-JUL-1999;	99US-0145591.
PR	27-JUL-1999;	99US-0145919.
PR	28-JUL-1999;	99US-0145951.
PR	02-AUG-1999;	99US-0146386.
PR	02-AUG-1999;	99US-0146388.
PR	02-AUG-1999;	99US-0146389.
PR	03-AUG-1999;	99US-0147038.
PR	04-AUG-1999;	99US-0147204.
PR	04-AUG-1999;	99US-0147302.
PR	05-AUG-1999;	99US-0147192.
PR	05-AUG-1999;	99US-0147250.
PR	11-AUG-1999;	99US-0148319.
PR	12-AUG-1999;	99US-0148341.
PR	13-AUG-1999;	99US-0148565.
PR	09-AUG-1999;	99US-0147493.
PR	09-AUG-1999;	99US-0147935.
PR	10-AUG-1999;	99US-0148171.
PR	11-AUG-1999;	99US-0148319.
PR	12-AUG-1999;	99US-0148341.
PR	13-AUG-1999;	99US-0148565.
PR	13-AUG-1999;	99US-0148684.
PR	16-AUG-1999;	99US-0143368.
PR	17-AUG-1999;	99US-0149175.
PR	18-AUG-1999;	99US-0149426.



WPI; 2001-266144/27.  
 DR  
 DR  
 XX  
 PT Novel nucleic acid sequences isolated from germinating seeds encoding  
 polypeptides that are useful to control seed germination in plants -  
 PS  
 XX  
 CC  
 CC endo-alpha-mannanase (e.g., Lycoptisicon esculentum (Le) MAN2),  
 polygalacturonase (PG) (e.g., LEXPA), xyloglucan endotransglycosylases  
 (XET) (e.g., LEXPA1) and expansins such as LeEXP4, LeEXP8 and LeEXP10  
 initially in the endosperm caps and are associated with cell wall  
 hydrolysis. These enzymes are associated with weakening of tissues  
 surrounding the embryo and/or initiating radicle growth. The control  
 expression of these endogenous genes is therefore a convenient means for  
 controlling seed germination. The present sequence is tomato seed  
 expansin, LeExp10, cDNA. Expansins are extracellular proteins that  
 facilitate cell wall extension.  
 XX  
 SQ Sequence 1167 BP; 319 A; 184 C; 268 G; 396 T; 0 other;  
 Query Match 49.7%; score 338.2; DB 22; Length 1167;  
 Best Local Similarity 69.0%; pred. No. 6.8e-108; Gaps  
 Matches 463; Conservative 0; Mismatches 208; Indels 0; Gaps  
 QY 10 GGCTGGAGGGGCCACCCACCTTAACTGCTGGACCGATCUGGCCACCATGGT 69  
 Db 160 GGATGATTGTTGAACGTCACTTCATGAGGTGATGCTTCGGACTATGGT 219  
 QY 70 GGAGCTGTTGGATGGATTACAGCCAGGTATGGCAGCACGGTGGCGCTG 129  
 Db 220 GGAGCAGTGTTATGGATTGTGACAGTGAGGTATGGTACAACACAGCAGT 279  
 QY 130 AGGACTGCCTTAATACATGGATTAGTGGTGGCTCTGCTGAAMAGCTGTACA 189  
 Db 280 AGTACAGCTGTCAATAATGGTTGAGTGTGGATCTTGCTTGGCTTAATGTGT 339  
 QY 190 AACGACCCATAATGGGCCAACATTAGGTCTCTGCCACCAACTTGGCT 249  
 Db 340 GGTGATTCGAGTGGCTTCCAGCTTCACTAGTGTAACTGCTACTAATTGGCA 399  
 QY 250 CCTRACTTGTCTCCCTACACACATGGATGGTGCACCCCTCTCCACACTC 309  
 Db 400 CCAAATTGTCCTTCGATAACGCTGGTGGGGTGTGCAATCCTCAGTGGACCACTT 459  
 QY 310 GACATGGTGGCTGCCTCTCCATACACATGGATGGTGCACCCCTCTCCACACTC 369  
 Db 460 GACCTGGCTACGCTGTITTCAAAATGCTCTAGTACAGCCTGGATGTCCTG 519  
 QY 370 TCCATTGCTAGGGTACCATGTTGAAGAAGGTGGATGGGTTAACATCAATGGCCAC 429  
 Db 520 GCTTACAGAAGTAGTACCTGGCAGAGAAAGCGGGATGAGTACACAGTGAAGGGTC 579  
 QY 430 TCATACTTCACCTCGTTGATCACAAAGTCGGGGCCAGCGACCTTCACTCTG 489  
 Db 580 TCCATTAGGTCTAGAACAGGGTGTGAGGATGAGTCAGGCAATTGGGCAAATGG 639  
 QY 490 TCGTATAAGGGTCTGCAACTGATGGCATTCACTGATGCTGAAATGGGCCAAACTGG 549  
 Db 640 TCCATTAGGTCTAGAACAGGGTGTGAGGATGAGTCAGGCAATTGGGCAAATGG 699  
 QY 550 CAARGCAACACTATCTCATGGCCAGGGCTTCTTTAACGACTCTAGTGTGTT 609  
 Db 700 CAGGCACTGCTTACTGATGGTCAATCTTAAAGTTRACTACAGGTGATGCC 759  
 QY 610 CGACTCTCAGCTGCCTATATCTCGTGTCTTCATACTGGCAAACTATGATA 669  
 Db 760 CGCACTGTTTGTGCAACATGCTATCCCTCTGGATGGTCATTTGGAAACATACACA 819

RESULT	14	Qy
AAC33121	670	GGCCCTCAAT
ID	111	680
AAC33121 standard; DNA:	1205	BFB
XX	111	111
AC	111	111
AAC33121;	111	111
XX	111	111
DT	17-OCT-2000	(first entry)
XX	111	111
DE	Arabidopsis thaliana DNA fragment	
XX	111	111
KW	Hybridisation assay; genetic map; protein identification; signal pathway; promoter; tele	
KW	metabolic pathway; promoter; tele	
XX	111	111
OS	Arabidopsis thaliana.	
XX	111	111
PN	EP1033405-A2.	
XX	111	111
PD	06-SEP-2000.	
XX	111	111
PP	25-FEB-2000; 2000FP-0301439.	
XX	111	111
PR	25-FEB-1999;	9905-0121825.
PR	05-MAR-1999;	9905-0123100.
PR	09-MAR-1999;	9905-0123588.
PR	23-MAR-1999;	9905-0125758.
PR	25-MAR-1999;	9905-0126254.
PR	29-MAR-1999;	9905-0126735.
PR	01-APR-1999;	9905-0127424.
PR	06-APR-1999;	9905-0128214.
PR	08-APR-1999;	9905-0128744.
PR	16-APR-1999;	9905-0129845.
PR	19-APR-1999;	9905-0130077.
PR	21-APR-1999;	9905-0130419.
PR	23-APR-1999;	9905-0130510.
PR	23-APR-1999;	9905-0130891.
PR	28-APR-1999;	9905-0131439.
PR	30-APR-1999;	9905-0132048.
PR	30-APR-1999;	9905-0132407.
PR	05-MAY-1999;	9905-0132484.
PR	06-MAY-1999;	9905-0132486.
PR	06-MAY-1999;	9905-0132487.
PR	07-MAY-1999;	9905-0132853.
PR	11-MAY-1999;	9905-0134256.
PR	14-MAY-1999;	9905-0134219.
PR	14-MAY-1999;	9905-0134221.
PR	14-MAY-1999;	9905-0134370.
PR	18-MAY-1999;	9905-0134758.
PR	19-MAY-1999;	9905-0134941.
PR	20-MAY-1999;	9905-0135218.
PR	21-MAY-1999;	9905-0135353.
PR	24-MAY-1999;	9905-0135629.
PR	25-MAY-1999;	9905-0136021.
PR	27-MAY-1999;	9905-0136392.
PR	28-MAY-1999;	9905-0136732.
PR	01-JUN-1999;	9905-0137222.
PR	03-JUN-1999;	9905-0137528.
PR	04-JUN-1999;	9905-0137750.
PR	07-JUN-1999;	9905-0137724.
PR	08-JUN-1999;	9905-0138094.
PR	10-JUN-1999;	9905-0138540.
PR	10-JUN-1999;	9905-0138847.
PR	14-JUN-1999;	9905-0139119.
PR	16-JUN-1999;	9905-0139452.
PR	16-JUN-1999;	9905-0139453.
PR	17-JUN-1999;	9905-0139492.

PR	18-JUN-1999;	99US-0139455.	PR	16-AUG-1999;	99US-0149368.
PR	18-JUN-1999;	99US-0139456.	PR	17-AUG-1999;	99US-0149175.
PR	18-JUN-1999;	99US-0139457.	PR	18-AUG-1999;	99US-0149426.
PR	18-JUN-1999;	99US-0139458.	PR	20-AUG-1999;	99US-0149723.
PR	18-JUN-1999;	99US-0139459.	PR	20-AUG-1999;	99US-0149929.
PR	18-JUN-1999;	99US-0139460.	PR	22-AUG-1999;	99US-0149902.
PR	18-JUN-1999;	99US-0139461.	PR	23-AUG-1999;	99US-0149930.
PR	18-JUN-1999;	99US-0139462.	PR	23-AUG-1999;	99US-0150566.
PR	18-JUN-1999;	99US-0139463.	PR	25-AUG-1999;	99US-0150884.
PR	18-JUN-1999;	99US-0139464.	PR	27-AUG-1999;	99US-0151065.
PR	18-JUN-1999;	99US-0139465.	PR	10-SEP-1999;	99US-0151066.
PR	18-JUN-1999;	99US-0139466.	PR	27-AUG-1999;	99US-0151080.
PR	21-JUN-1999;	99US-0139467.	PR	30-AUG-1999;	99US-0151303.
PR	22-JUN-1999;	99US-0140553.	PR	31-AUG-1999;	99US-0151438.
PR	23-JUN-1999;	99US-0140554.	PR	01-SEP-1999;	99US-0151530.
PR	24-JUN-1999;	99US-0140555.	PR	07-SEP-1999;	99US-0152363.
PR	28-JUN-1999;	99US-0140559.	PR	10-SEP-1999;	99US-0153070.
PR	29-JUN-1999;	99US-0140891.	PR	15-SEP-1999;	99US-0153758.
PR	30-JUN-1999;	99US-0141087.	PR	15-SEP-1999;	99US-0154018.
PR	23-JUN-1999;	99US-0141454.	PR	16-SEP-1999;	99US-0154039.
PR	01-JUL-1999;	99US-0142154.	PR	20-SEP-1999;	99US-0154779.
PR	02-JUL-1999;	99US-0142555.	PR	22-SEP-1999;	99US-0155139.
PR	06-JUL-1999;	99US-0142590.	PR	23-SEP-1999;	99US-0155307.
PR	08-JUL-1999;	99US-0142603.	PR	24-SEP-1999;	99US-0155659.
PR	09-JUL-1999;	99US-0142720.	PR	28-SEP-1999;	99US-0156458.
PR	12-JUL-1999;	99US-0142977.	PR	29-SEP-1999;	99US-0156596.
PR	01-JUL-1999;	99US-0143142.	PR	04-OCT-1999;	99US-0157117.
PR	13-JUL-1999;	99US-014324.	PR	05-OCT-1999;	99US-0157753.
PR	14-JUL-1999;	99US-014324.	PR	06-OCT-1999;	99US-0157865.
PR	15-JUL-1999;	99US-0144290.	PR	07-OCT-1999;	99US-0158029.
PR	16-JUL-1999;	99US-0144203.	PR	08-OCT-1999;	99US-0158232.
PR	19-JUL-1999;	99US-0144225.	PR	12-OCT-1999;	99US-0158369.
PR	20-JUL-1999;	99US-0144311.	PR	13-OCT-1999;	99US-0159293.
PR	19-JUL-1999;	99US-014432.	PR	14-OCT-1999;	99US-0159294.
PR	19-JUL-1999;	99US-014433.	PR	13-OCT-1999;	99US-0159295.
PR	19-JUL-1999;	99US-0144885.	PR	14-OCT-1999;	99US-0159329.
PR	16-JUL-1999;	99US-0144886.	PR	14-OCT-1999;	99US-0159331.
PR	20-JUL-1999;	99US-0144852.	PR	14-OCT-1999;	99US-0159637.
PR	22-JUL-1999;	99US-0144887.	PR	21-OCT-1999;	99US-0159638.
PR	20-JUL-1999;	99US-0144884.	PR	18-OCT-1999;	99US-0159584.
PR	22-JUL-1999;	99US-0144889.	PR	21-OCT-1999;	99US-0159329.
PR	21-JUL-1999;	99US-0144814.	PR	21-OCT-1999;	99US-0160741.
PR	21-JUL-1999;	99US-0144834.	PR	21-OCT-1999;	99US-0160767.
PR	21-JUL-1999;	99US-0144835.	PR	21-OCT-1999;	99US-0160768.
PR	22-JUL-1999;	99US-0145085.	PR	21-OCT-1999;	99US-0160770.
PR	22-JUL-1999;	99US-0145087.	PR	21-OCT-1999;	99US-0160814.
PR	22-JUL-1999;	99US-0145088.	PR	21-OCT-1999;	99US-0160815.
PR	22-JUL-1999;	99US-0145089.	PR	22-OCT-1999;	99US-0160980.
PR	22-JUL-1999;	99US-0145090.	PR	22-OCT-1999;	99US-0160981.
PR	22-JUL-1999;	99US-0145092.	PR	22-OCT-1999;	99US-0160989.
PR	22-JUL-1999;	99US-0145094.	PR	25-OCT-1999;	99US-0161404.
PR	23-JUL-1999;	99US-0145118.	PR	25-OCT-1999;	99US-0161405.
PR	23-JUL-1999;	99US-0145224.	PR	25-OCT-1999;	99US-0161406.
PR	22-JUL-1999;	99US-0145226.	PR	26-OCT-1999;	99US-0161359.
PR	26-OCT-1999;	99US-0145226.	PR	26-OCT-1999;	99US-0161360.
PR	02-AUG-1999;	99US-0146886.	PR	26-OCT-1999;	99US-0161361.
PR	02-AUG-1999;	99US-0146888.	PR	28-OCT-1999;	99US-0161920.
PR	02-AUG-1999;	99US-0147403.	PR	28-OCT-1999;	99US-0161992.
PR	03-AUG-1999;	99US-0147038.	PR	28-OCT-1999;	99US-0161993.
PR	04-AUG-1999;	99US-0147204.	PR	29-OCT-1999;	99US-0162142.
PR	04-AUG-1999;	99US-0147202.	PR	29-OCT-1999;	99US-0162142.
PR	05-AUG-1999;	99US-0147932.	PR	29-OCT-1999;	99US-0162142.
PR	05-AUG-1999;	99US-0147260.	PR	29-OCT-1999;	99US-0162142.
PR	06-AUG-1999;	99US-0147303.	PR	29-OCT-1999;	99US-0162142.
PR	06-AUG-1999;	99US-0147316.	PR	29-OCT-1999;	99US-0162142.
PR	09-AUG-1999;	99US-014743.	PR	29-OCT-1999;	99US-0162142.
PR	09-AUG-1999;	99US-0147935.	PR	29-OCT-1999;	99US-0162142.
PR	10-AUG-1999;	99US-0148319.	PR	29-OCT-1999;	99US-0162142.
PR	11-AUG-1999;	99US-0148341.	PR	29-OCT-1999;	99US-0162142.
PR	12-AUG-1999;	99US-0148565.	PR	29-OCT-1999;	99US-0162142.
PR	13-AUG-1999;	99US-0148569.	PR	29-OCT-1999;	99US-0162142.
PR	13-AUG-1999;	99US-0148684.	PR	29-OCT-1999;	99US-0162142.

QY 128 TGAACCACTCGGCTATTACAATGGATAAAGTGTGGTGCTTGCTCGAAATGACTGT 187  
 PR PR 19-APR-1999; 99US-0129945.  
 PR PR 19-APR-1999; 99US-0130077.  
 Db 304 TAAGCAGCGCTCTTCACGGGGCCAAGCTGGGGCTGTTTCAGATAATGCC 363  
 PR PR 21-APR-1999; 99US-0130449.  
 PR PR 23-APR-1999; 99US-0130510.  
 QY 188 CAAACGACCTAAATGGGCCACTTATTAAGGTTCTGCACCACCTTGCC 247  
 PR PR 23-APR-1999; 99US-0130891.  
 PR PR 28-APR-1999; 99US-0131149.  
 Db 364 TAAACGACCCAAATGGTGTATGGTGGACATCACCGTACCGGACACAACTTGTG 423  
 PR PR 30-APR-1999; 99US-013248.  
 PR PR 30-APR-1999; 99US-0132407.  
 QY 248 CTCTTAACTTGGTCTCCCTAACACAAATGGGATGGTGGACATCACCGTACCGGACACAACTTGTG 307  
 PR PR 04-MAY-1999; 99US-013284.  
 PR PR 05-MAY-1999; 99US-013285.  
 Db 424 CAAACGACCTAAATGGTGTATGGTGGACATCACCGTACCGGACACAACTTGTG 483  
 PR PR 06-MAY-1999; 99US-013286.  
 PR PR 06-MAY-1999; 99US-013287.  
 QY 308 TCGACATGGCTGAGCCCTGCTTCATACCGAGCTGGTATCGTCCCCG 367  
 PR PR 07-MAY-1999; 99US-0132663.  
 PR PR 11-MAY-1999; 99US-0134256.  
 Db 484 TCAATTAGTCGCGGCCATCTTCCTCGTATGCTCAATACAAAGCCGGPCTCCCTG 543  
 PR PR 14-MAY-1999; 99US-0134219.  
 PR PR 14-MAY-1999; 99US-0134221.  
 QY 368 TCTCTTTCGTTAGGTACCATGATGAGAAGGTGGAGTTACAATCATGCC 427  
 PR PR 14-MAY-1999; 99US-0134270.  
 PR PR 18-MAY-1999; 99US-0134768.  
 PR PR 19-MAY-1999; 99US-0134941.  
 Db 544 TCCAAATACGGAGTGGCTGGGGAGAAAGGAGATAAGATCACGATCACCGTC 603  
 PR PR 20-MAY-1999; 99US-013524.  
 QY 428 ACTCATACTTCACACCTCTTTGATCACAAGCTGCGGGAGCGGACACTTG 487  
 PR PR 21-MAY-1999; 99US-013553.  
 PR PR 24-MAY-1999; 99US-0135529.  
 Db 604 ATTCATACATTCACACCTCTTACTATACAACTGCGGGCCGGAGATGTC 663  
 PR PR 25-MAY-1999; 99US-0136021.  
 PR PR 27-MAY-1999; 99US-0136392.  
 PR PR 28-MAY-1999; 99US-0136782.  
 PR PR 01-JUN-1999; 99US-013722.  
 PR PR 03-JUN-1999; 99US-0137528.  
 PR PR 04-JUN-1999; 99US-0137502.  
 PR PR 07-JUN-1999; 99US-0137724.  
 PR PR 08-JUN-1999; 99US-0138094.  
 PR PR 10-JUN-1999; 99US-0138540.  
 PR PR 10-JUN-1999; 99US-0138947.  
 PR PR 14-JUN-1999; 99US-0139119.  
 PR PR 16-JUN-1999; 99US-0139452.  
 PR PR 16-JUN-1999; 99US-0139453.  
 PR PR 17-JUN-1999; 99US-0139492.  
 PR PR 18-JUN-1999; 99US-0139454.  
 PR PR 18-JUN-1999; 99US-0139455.  
 PR PR 18-JUN-1999; 99US-0139456.  
 PR PR 18-JUN-1999; 99US-0139457.  
 PR PR 18-JUN-1999; 99US-0139458.  
 RESULT 15  
 AAC44975  
 ID AAC44975 standard; DNA: 1201 BP.  
 XX  
 XX  
 AC AAC44975;  
 XX  
 DT 18-OCT-2000 (first entry)  
 XX Arabidopsis thaliana DNA fragment SEQ ID NO: 44832.  
 XX Hyridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.  
 KW metabolics pathway; promoter; termination sequence; ss.  
 KW Arabidopsis thaliana.  
 OS  
 XX EP1033405-A2.  
 XX  
 PD 06-SEP-2000.  
 XX  
 PR 25-FEB-2000; 2000BP-0301439.  
 PR  
 PR 25-FEB-1999; 99US-0121822.  
 PR  
 PR 05-MAR-1999; 99US-0123180.  
 PR  
 PR 09-MAR-1999; 99US-0123548.  
 PR  
 PR 23-MAR-1999; 99US-0125788.  
 PR  
 PR 25-MAR-1999; 99US-0126264.  
 PR  
 PR 29-MAR-1999; 99US-0126785.  
 PR  
 PR 01-APR-1999; 99US-0127462.  
 PR  
 PR 06-APR-1999; 99US-0128234.  
 PR  
 PR 08-APR-1999; 99US-0128714.

PR	19-JUL-1999;	99US-0144334.	PR	14-OCT-1999;	99US-0159329.		
PR	20-JUL-1999;	99US-0144335.	PR	14-OCT-1999;	99US-0159330.		
PR	20-JUL-1999;	99US-0144632.	PR	14-OCT-1999;	99US-0159331.		
PR	20-JUL-1999;	99US-0144884.	PR	14-OCT-1999;	99US-0159638.		
PR	21-JUL-1999;	99US-0144814.	PR	18-OCT-1999;	99US-0159584.		
PR	21-JUL-1999;	99US-0145086.	PR	21-OCT-1999;	99US-0160741.		
PR	21-JUL-1999;	99US-0145088.	PR	21-OCT-1999;	99US-0160767.		
PR	22-JUL-1999;	99US-0145085.	PR	21-OCT-1999;	99US-0160768.		
PR	22-JUL-1999;	99US-0145087.	PR	21-OCT-1999;	99US-0160770.		
PR	22-JUL-1999;	99US-0145089.	PR	21-OCT-1999;	99US-0160814.		
PR	22-JUL-1999;	99US-0145192.	PR	21-OCT-1999;	99US-0160815.		
PR	23-JUL-1999;	99US-0145145.	PR	22-OCT-1999;	99US-0160980.		
PR	23-JUL-1999;	99US-0145218.	PR	22-OCT-1999;	99US-0160981.		
PR	23-JUL-1999;	99US-0145224.	PR	25-OCT-1999;	99US-0161049.		
PR	26-JUL-1999;	99US-0145276.	PR	25-OCT-1999;	99US-0161405.		
PR	27-JUL-1999;	99US-0145913.	PR	27-JUL-1999;	99US-0161406.		
PR	27-JUL-1999;	99US-0145918.	PR	26-OCT-1999;	99US-0161359.		
PR	28-JUL-1999;	99US-0145951.	PR	26-OCT-1999;	99US-0161360.		
PR	02-AUG-1999;	99US-0146386.	PR	28-OCT-1999;	99US-0161920.		
PR	02-AUG-1999;	99US-0146388.	PR	28-OCT-1999;	99US-0161992.		
PR	03-AUG-1999;	99US-0146389.	PR	29-OCT-1999;	99US-0161993.		
PR	04-AUG-1999;	99US-0147204.	PR	29-OCT-1999;	99US-0162142.		
PR	04-AUG-1999;	99US-0147302.	Query Match				
PR	05-AUG-1999;	99US-0147320.	Best Local Similarity				
PR	06-AUG-1999;	99US-0147303.	Matches				
PR	06-AUG-1999;	99US-0147303.	Conservative				
PR	09-AUG-1999;	99US-0147493.	Pred. No.				
PR	09-AUG-1999;	99US-0147335.	No. 1.4e-05;				
PR	10-AUG-1999;	99US-0148171.	MisMatches				
PR	11-AUG-1999;	99US-0148319.	214;				
PR	12-AUG-1999;	99US-0148319.	Indels				
PR	13-AUG-1999;	99US-0148365.	0;				
PR	13-AUG-1999;	99US-0148884.	Caps				
PR	16-AUG-1999;	99US-0149368.	0;				
PR	17-AUG-1999;	99US-0149375.	Query				
PR	18-AUG-1999;	99US-0149126.	8				
PR	20-AUG-1999;	99US-014922.	GTGGCTGGAGCTGTTGGGTATGGAAATTATACTACGCCAACGGTATGCCACCGTGGCGC				
PR	20-AUG-1999;	99US-014923.	67				
PR	23-AUG-1999;	99US-0149300.	Db				
PR	25-AUG-1999;	99US-0150566.	184				
PR	26-AUG-1999;	99US-0150884.	GTGGCTGGAGCTGTTGGGTATGGAAATTATACTACGCCAACGGTATGCCACCGTGGCGC				
PR	27-AUG-1999;	99US-0151065.	243				
PR	27-AUG-1999;	99US-0151066.	GTGGCTGGAGCTGTTGGGTATGGAAATTATACTACGCCAACGGTATGCCACCGTGGCGC				
PR	30-AUG-1999;	99US-0151303.	303				
PR	31-AUG-1999;	99US-0151438.	Db				
PR	01-SEP-1999;	99US-0151930.	304				
PR	07-SEP-1999;	99US-0152363.	TAAGCACGCCCTATTCAACGGGCCAACGCTGGCTGGCGC				
PR	10-SEP-1999;	99US-0153070.	127				
PR	13-SEP-1999;	99US-0153758.	Db				
PR	15-SEP-1999;	99US-0154018.	368				
PR	16-SEP-1999;	99US-0154039.	TCGCCTTGTGAGCTGCTGGCGAGAACGGAGGATATACTACGCCAACGGTATGCCACCGT				
PR	20-SEP-1999;	99US-0156396.	427				
PR	22-SEP-1999;	99US-0155139.	Db				
PR	23-SEP-1999;	99US-0155486.	544				
PR	24-SEP-1999;	99US-0155559.	TCGCATACCTCTGCTACTTATACTACGCCAACGGTATGCCACCGTGGCGC				
PR	28-SEP-1999;	99US-0156458.	603				
PR	29-SEP-1999;	99US-0156596.	Db				
PR	04-OCT-1999;	99US-0157117.	428				
PR	05-OCT-1999;	99US-0157753.	TCGCATACCTCTGCTACTTATACTACGCCAACGGTATGCCACCGTGGCGC				
PR	06-OCT-1999;	99US-0157165.	487				
PR	07-OCT-1999;	99US-0158029.	Db				
PR	08-OCT-1999;	99US-0158222.	664				
PR	12-OCT-1999;	99US-0158269.	ATTCATACCTCTGCTACTTATACTACGCCAACGGTATGCCACCGTGGCGC				
PR	13-OCT-1999;	99US-0159293.	663				
PR	13-OCT-1999;	99US-0159294.	Db				
PR	13-OCT-1999;	99US-0159295.	548				
PR	07-OCT-1999;	99US-0159295.	GGCAAAGCACAACTCTCACTGCTGGCCAGGGCTTGCTTCAGTCACCTGTC				
PR	08-OCT-1999;	99US-0159295.	607				
PR	12-OCT-1999;	99US-0159295.	724				
PR	13-OCT-1999;	99US-0159295.	GCGAACGCTACTGCTGCTTAACTGCTGCTTAACTGCTGCTTAACTGCTG				
PR	13-OCT-1999;	99US-0159295.	783				
PR	13-OCT-1999;	99US-0159295.	608				
PR	13-OCT-1999;	99US-0159295.	GCGCTACAGTATATCTAACGACGACTGAGCTGGGACAGACTATA				
PR	13-OCT-1999;	99US-0159295.	843				

Tue Oct 15 18:05:20 2002

us-09-896-301-1.rng

Page 26

QY 668 AACGCCCTCAATTC 681  
| | | |  
844 CCCGAAACAGTTC 857

Search completed: October 13, 2002, 23:03:27  
Job time : 251 secs

GenCore version 5.1.3  
Copyright (c) 1993 - 2002 Compugen Ltd.

Om nucleic - nucleic search, using sw model  
Run on: October 13, 2002, 18:25:39 ; Search time 1809 Seconds  
7877.817 Million cell updates/sec

Title: US-09-896-301-1

perfect score: 681

Sequence: I gactacgggtggcagag.....cctatagaaggccctcaattc 681

Scoring table: IDENTITY\_NUC

Gapop 10.0 , Gapext 1.0

Searched: 179765 seqs, 10463268293 residues

Total number of hits satisfying chosen parameters: 3595312

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%, Maximum Match 100%

Listing first 45 summaries

Database : GenEntl:\*

1:	gb_ba:*
2:	gb_htg:*
3:	gb_in:*
4:	gb_com:*
5:	gb_ov:*
6:	gb_pat:*
7:	gb_ph:*
8:	gb_pl:*
9:	gb_pr:*
10:	gb_ro:*
11:	gb_sts:*
12:	gb_sy:*
13:	gb_un:*
14:	gb_vl:*
15:	em_ba:*
16:	em_fun:*
17:	em_hum:*
18:	em_in:*
19:	em_mu:*
20:	em_lom:*
21:	em_or:*
22:	em_ov:*
23:	em_pat:*
24:	em_ph:*
25:	em_pl:*
26:	em_ro:*
27:	em_sts:*
28:	em_un:*
29:	em_vl:*
30:	em_htg_hum:*
31:	em_htg_inv:*
32:	em_htg_other:*
33:	em_htg_inv:*

#### ALIGNMENTS

RESULT 1	
LOCUS	AR076514
DEFINITION	Sequence 1 from patent US 5959082.
ACCESSION	AR076514
VERSION	AR076514.1
KEYWORDS	GI:10003260
SOURCE	Unknown.
ORGANISM	Unclassified.
REFERENCE	1 (bases 1 to 681)
AUTHORS	Cosgrove,D.J., McQueen-Mason,S., Guiltinan,M., Shcherban,T. and Shi,J.
TITLE	Proteins catalyzing the extension of plant cell walls
FEATURES	Patent: US 5959082-A 1-28-SEP-1999; Location/Qualifiers
source	/organism="unknown"
BASE COUNT	161 a 179 c 164 g 177 t
ORIGIN	Query Match 100 %; Score 681; DB 6; Length 681; Best Local Similarity 100.0%; pred. No. 9e-199;

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
------------	-------	-------------	--------	-------	-------------

Matches	681; Conservative	0; Mismatches	0; Indels	0; Gaps	0;
Qy	1 GACTACGGGCGCAGAGCGGCCACGCCACCTTATGGCTGGGACGCATCTGC 60				
Db	1 GACTACGGGCGCAGAGCGGCCACGCCACCTTATGGCTGGGACGCATCTGC 60				
Qy	61 ACCATGGGGAGCTTGGSSTATGGAAATTACAGCCAGGSTATGCCACACCG 120				
Db	61 ACCATGGGGAGCTTGGSSTATGGAAATTACAGCCAGGSTATGCCACACCG 120				
Qy	121 GTGGCGCTGAGCCTGGCCTATTACATGGTTAAGTGTGGCTGTGCTGAATG 180				
Db	121 GTGGCGCTGAGCCTGGCCTATTACATGGTTAAGTGTGGCTGTGCTGAATG 180				
Qy	181 ACTTGACAAACGACCCTTAATGCTGCGCTTACAGCCAGGATGGCACAGC 120				
Db	181 ACTTGACAAACGACCCTTAATGCTGCGCTTACAGCCAGGATGGCACAGC 120				
Qy	241 TTTCGCCCCCTCACTTGCTCCCTAACAGCAATGGCTTAATCGCAACCTCCCTC 300				
Db	241 TTTCGCCCCCTCACTTGCTCCCTAACAGCAATGGCTTAATCGCAACCTCCCTC 300				
Qy	301 CACACTGGACATGGCTGAGCTGCCCTCCCTCAATGCTCAATCCGAGCTGTAC 360				
Db	301 CACACTGGACATGGCTGAGCTGCCCTCCCTCAATGCTCAATCCGAGCTGTAC 360				
Qy	421 AATGGCCACTCATRACTTCACCTGTTGATCACACGCTGGCGCAGGGAGTC 480				
Db	421 AATGGCCACTCATRACTTCACCTGTTGATCACACGCTGGCGCAGGGAGTC 480				
Qy	481 CACTCTGTCGCTTAAGGGGTCTGACTGTGAACTCATGCTTAGAAATGGGGC 540				
Db	481 CACTCTGTCGCTTAAGGGGTCTGACTGTGAACTCATGCTTAGAAATGGGGC 540				
Qy	541 CAAACTGCAAGCAACAATCTCATGGCCAAGGCCTTCTTCAGTCACCTT 600				
Db	541 CAAACTGCAAGCAACAATCTCATGGCCAAGGCCTTCTTCAGTCACCTT 600				
Qy	601 AGTGTGGGCACTCTACTGGCTATACTGGCTCCATTGGCAA 660				
Db	601 AGTGTGGGCACTCTACTGGCTCCATTGGCAA 660				
Qy	661 ACCATGAGGCCCTCAATC 681				
Db	661 ACCATGAGGCCCTCAATC 681				
<b>RESULT 2</b>					
AR161478					
LOCUS	AR161478	Sequence 1 from patent US 6255466.	681 bp	DNA	linear
DEFINITION	AR161478			PAT	17-OCT-2001
VERSION	AR161478.1				
KEYWORDS	.				
SOURCE	Unknown.				
ORGANISM	Unknown.				
REFERENCE	1 (bases 1 to 681)				
AUTHORS	Cosgrove, D.J., McQueen-Mason, S., Guiltinan, M., Shcherban, T. and Shi, J.				
TITLE	Purified plant expansion proteins and DNA encoding same				
JOURNAL	Patent: US 6255466-A 1 03-JUL-2001;				
FEATURES	Location/Qualifiers				
SOURCE	1. .681 /organism="unknown"				
BASE COUNT	161 a 179 c 164 g 177 t				
ORIGIN					
Query Match	100.0%; Score 681; DB 6; Length 681;				

CDS

<1.. 684  
/notetc="unnamed protein product"

/codon\_start=1

/protein\_id="CD19043\_1"

/db\_xref="GI:17645711"

/translation="DYGGMQSHATFYGGDAASSTMGACGYNSLYSGYGTNIVALS

TALFNLNGLSCGAFEMTCNDPKLPGITRVTNFCPNFPNLPNNNGWCNPPLQH

FDMAEPAFLQIAQYRAGIVEVSFRVPCMKKGYRFTINGHSFNLVLTNVGAGDV

HSVSIKGSRSRGWMSNRNQNWSNNYLNGQLSFOVTLSDRTLTAVNLVPSNWQF

GQTYEGPQF"

BASE COUNT

163 a 179 c 164 g 178 t

ORIGIN

Query Match 100.0%; Score 681; DB 6; Length 684;

Best Local Similarity 100.0%; Pred. No. 9e-199; Matches 681; Conservative 0; Mismatches 0; Indels 0; gaps 0;

Qy 1 GACTAGCTGGCTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGACGCACCTGGC 60

Db 1 GACTACCGTGCTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGACGCACCTGGC 60

Qy 61 ACCATGGTGGCTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGACGCACCTGGC 120

Db 61 ACCATGGTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGACGCACCTGGC 120

Qy 61 ACCATGGTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGACGCACCTGGC 120

Db 61 ACCATGGTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGACGCACCTGGC 120

Qy 121 GRCGCGCTGAGACTGGCTATTAACTGATGTAAGTGTGTTGCTGCTCGAATG 180

Db 121 GRCGCGCTGAGACTGGCTATTAACTGATGTAAGTGTGTTGCTGCTCGAATG 180

Qy 181 ACTGTGCAAAAGGACCTTAATGGTGGCTTCGGGACTATACTGGTCACTGCCAAC 240

Db 181 ACTGTGCAAAAGGACCTTAATGGTGGCTTCGGGACTATACTGGTCACTGCCAAC 240

Qy 241 TTTTGCCCTCTTAACTTGTCTCCCTAACACACAAAGGTGATGGTGCACCCCTCTC 300

Db 241 TTTTGCCCTCTTAACTTGTCTCCCTAACACACAAAGGTGATGGTGCACCCCTCTC 300

Qy 301 CAACACTCGACAGTGGCTGAGCCTCCCTAACATGCCCTAACACCGAGCTGCTAC 360

Db 301 CAACACTCGACAGTGGCTGAGCCTCCCTAACATGCCCTAACACCGAGCTGCTAC 360

Qy 361 GRCGCGCTCTCTTCTGGTAGGTACCATGATGAGAAGGTGGAGTGGAGTTAACTC 420

Db 361 GRCGCGCTCTCTTCTGGTAGGTACCATGATGAGAAGGTGGAGTGGAGTTAACTC 420

Qy 421 AATGGCCACTCATACTCAACCTCGTTGATGACACAGCTGGTGGCAGGGCAGTC 480

Db 421 AATGGCCACTCATACTCAACCTCGTTGATGACACAGCTGGTGGCAGGGCAGTC 480

Qy 421 AATGGCCACTCATACTCAACCTCGTTGATGACACAGCTGGTGGCAGGGCAGTC 480

Db 421 AATGGCCACTCATACTCAACCTCGTTGATGACACAGCTGGTGGCAGGGCAGTC 480

Qy 481 CACTCTGCTGATAAAGGGCTCTGACTSGATGCCAATCCATGCTCTAGAAAATGGGC 540

Db 481 CACTCTGCTGATAAAGGGCTCTGACTSGATGCCAATCCATGCTCTAGAAAATGGGC 540

Qy 541 CAAACTCGCAAGCAACAACTTCTCTGATGCCAAGGCCCTTCTTCACTCACTT 600

Db 541 CAAACTCGCAAGCAACAACTTCTCTGATGCCAAGGCCCTTCTTCACTCACTT 600

Qy 601 AGTGTGGTGCACCTCTCACTGGCTTATCTGTTCTTCCATGGCAATTGGCAA 660

Db 601 AGTGTGGTGCACCTCTCACTGGCTTATCTGTTCTTCCATGGCAATTGGCAA 660

Qy 661 ACCTATGAAGGCCCTCAATTC 681

Db 661 ACCTATGAAGGCCCTCAATTC 681

Qy 661 ACCTATGAAGGCCCTCAATTC 681

Db 661 ACCTATGAAGGCCCTCAATTC 681

RESULT 4

CSU30382 CSU30382 992 bp mRNA linear PLN 04-DEC-1996

LOCUS Cucumis sativus expansin (Cs-EXP1) mRNA, complete cds.

DEFINITION Cucumis sativus expansin (Cs-EXP1) mRNA, complete cds.

ACCESSION U30382 U30382.1 GI:1040875

VERSION . KEYWORDS

SOURCE cucumber.

ORGANISM Cucumis sativus

Eukaryota; Viridiplantae; Streptophytina; Tracheophytina;

Spermatophyta; Magnoliophytina; eudicotyledons; core eudicots;

Rosidae; eurosids I; Cucurbitales; Cucurbitaceae; Cucumis.

REFERENCE 1 (bases 1 to 992)

Scherban,T.Y., Shi,J., Durachko,D.M., Guiltinan,M.J.,

McQueen-Mason,S.J., Shieh,M. and Cosgrove,D.J.

TITLE Molecular cloning and sequence analysis of expansins-a highly

conserved, multigene family of proteins that mediate cell wall

extension in plants

PROC. NATL. ACAD. SCI. U.S.A. 92 (20), 9245-9249 (1995)

JOURNAL MEDLINE 96016146

REFERENCE 2 (bases 1 to 992)

Scherban,T., Shi,J., Durachko,D.M., Guiltinan,M.J.,

McQueen-Mason,S.J., Shieh,M. and Cosgrove,D.J.

TITLE Direct Submission

SUBMITTED (27-JUN-1995) Daniel J. Cosgrove, Biology, Pennsylvania

STATE UNIVERSITY, 208 Mueller Laboratory, University Park, PA

16802, USA

FEATURES JOURNAL/MEDLINE

REFERENCE 1 (. 992)

Scherban,T., Shi,J., Durachko,D.M., Guiltinan,M.J.,

McQueen-Mason,S.J., Shieh,M. and Cosgrove,D.J.

TITLE STATE UNIVERSITY, 208 MUELLER LABORATORY, UNIVERSITY PARK, PA

16802, USA

FEATURES SOURCE

REFERENCE 1 (. 992)

Scherban,T., Shi,J., Durachko,D.M., Guiltinan,M.J.,

McQueen-Mason,S.J., Shieh,M. and Cosgrove,D.J.

TITLE STATE UNIVERSITY, 208 MUELLER LABORATORY, UNIVERSITY PARK, PA

16802, USA

FEATURES FEATURES

REFERENCE 1 (. 992)

Scherban,T., Shi,J., Durachko,D.M., Guiltinan,M.J.,

McQueen-Mason,S.J., Shieh,M. and Cosgrove,D.J.

TITLE STATE UNIVERSITY, 208 MUELLER LABORATORY, UNIVERSITY PARK, PA

16802, USA

FEATURES SOURCE

REFERENCE 1 (. 992)

Scherban,T., Shi,J., Durachko,D.M., Guiltinan,M.J.,

McQueen-Mason,S.J., Shieh,M. and Cosgrove,D.J.

TITLE STATE UNIVERSITY, 208 MUELLER LABORATORY, UNIVERSITY PARK, PA

16802, USA

FEATURES FEATURES

REFERENCE 1 (. 992)

Scherban,T., Shi,J., Durachko,D.M., Guiltinan,M.J.,

McQueen-Mason,S.J., Shieh,M. and Cosgrove,D.J.

TITLE STATE UNIVERSITY, 208 MUELLER LABORATORY, UNIVERSITY PARK, PA

16802, USA

FEATURES FEATURES

REFERENCE 1 (. 992)

Scherban,T., Shi,J., Durachko,D.M., Guiltinan,M.J.,

McQueen-Mason,S.J., Shieh,M. and Cosgrove,D.J.

TITLE STATE UNIVERSITY, 208 MUELLER LABORATORY, UNIVERSITY PARK, PA

16802, USA

FEATURES FEATURES

REFERENCE 1 (. 992)

Scherban,T., Shi,J., Durachko,D.M., Guiltinan,M.J.,

McQueen-Mason,S.J., Shieh,M. and Cosgrove,D.J.

TITLE STATE UNIVERSITY, 208 MUELLER LABORATORY, UNIVERSITY PARK, PA

16802, USA

<1.. 684  
/notetc="unnamed protein product"  
/codon\_start=1  
/protein\_id="CD19043\_1"  
/db\_xref="GI:17645711"  
/translation="DYGGMQSHATFYGGDAASSTMGACGYNSLYSGYGTNIVALS  
TALFNLNGLSCGAFEMTCNDPKLPGITRVTNFCPNFPNLPNNNGWCNPPLQH  
FDMAEPAFLQIAQYRAGIVEVSFRVPCMKKGYRFTINGHSFNLVLTNVGAGDV  
HSVSIKGSRSRGWMSNRNQNWSNNYLNGQLSFOVTLSDRTLTAVNLVPSNWQF  
GQTYEGPQF"  
BASE COUNT 163 a 179 c 164 g 178 t  
ORIGIN  
Query Match 100.0%; Score 681; DB 6; Length 684;  
Best Local Similarity 100.0%; Pred. No. 9e-199; Matches 681; Conservative 0; Mismatches 0; Indels 0; gaps 0;  
Qy 1 GACTAGCTGGCTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGTGGACGCACCTGGC 60  
Db 1 GACTACCGTGCTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGTGGACGCACCTGGC 60  
Qy 61 ACCATGGTGGCTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGTGGACGCACCTGGC 120  
Db 61 ACCATGGTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGTGGACGCACCTGGC 120  
Qy 61 ACCATGGTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGTGGACGCACCTGGC 120  
Db 61 ACCATGGTGGAGAGGGGACGCCACCTTTATGTTGGTGGTGGTGGACGCACCTGGC 120  
Qy 121 GRCGCGCTGAGACTGGCTATTAACTGATGTAAGTGTGTTGCTGCTCGAATG 180  
Db 121 GRCGCGCTGAGACTGGCTATTAACTGATGTAAGTGTGTTGCTGCTCGAATG 180  
Qy 181 ACTGTGCAAAAGGACCTTAATGGTGGCTTCGGGACTATACTGGTCACTGCCAAC 240  
Db 181 ACTGTGCAAAAGGACCTTAATGGTGGCTTCGGGACTATACTGGTCACTGCCAAC 240  
Qy 241 TTTTGCCCTCTTAACTTGTCTCCCTAACACACAAAGGTGATGGTGCACCCCTCTC 300  
Db 241 TTTTGCCCTCTTAACTTGTCTCCCTAACACACAAAGGTGATGGTGCACCCCTCTC 300  
Qy 301 CAACACTCGACAGTGGCTGAGCCTCCCTAACATGCCCTAACACCGAGCTGCTAC 360  
Db 301 CAACACTCGACAGTGGCTGAGCCTCCCTAACATGCCCTAACACCGAGCTGCTAC 360  
Qy 361 GRCGCGCTCTCTTCTGGTAGGTACCATGATGAGAAGGTGGAGTGGAGTTAACTC 420  
Db 361 GRCGCGCTCTCTTCTGGTAGGTACCATGATGAGAAGGTGGAGTGGAGTTAACTC 420  
Qy 421 AATGGCCACTCATACTCAACCTCGTTGATGACACAGCTGGTGGCAGGGCAGTC 480  
Db 421 AATGGCCACTCATACTCAACCTCGTTGATGACACAGCTGGTGGCAGGGCAGTC 480  
Qy 421 AATGGCCACTCATACTCAACCTCGTTGATGACACAGCTGGTGGCAGGGCAGTC 480  
Db 421 AATGGCCACTCATACTCAACCTCGTTGATGACACAGCTGGTGGCAGGGCAGTC 480  
Qy 481 CACTCTGCTGATAAAGGGCTCTGACTSGATGCCAATCCATGCTCTAGAAAATGGGC 540  
Db 481 CACTCTGCTGATAAAGGGCTCTGACTSGATGCCAATCCATGCTCTAGAAAATGGGC 540  
Qy 541 CAAACTCGCAAGCAACAACTTCTCTGATGCCAAGGCCCTTCTTCACTCACTT 600  
Db 541 CAAACTCGCAAGCAACAACTTCTCTGATGCCAAGGCCCTTCTTCACTCACTT 600  
Qy 601 AGTGTGGTGCACCTCTCACTGGCTTATCTGTTCTTCCATGGCAATTGGCAA 660  
Db 601 AGTGTGGTGCACCTCTCACTGGCTTATCTGTTCTTCCATGGCAATTGGCAA 660  
Qy 661 ACCTATGAAGGCCCTCAATTC 681  
Db 661 ACCTATGAAGGCCCTCAATTC 681  
Qy 661 ACCTATGAAGGCCCTCAATTC 681  
Db 661 ACCTATGAAGGCCCTCAATTC 681  
RESULT 4  
CSU30382 CSU30382 992 bp mRNA linear PLN 04-DEC-1996  
LOCUS Cucumis sativus expansin (Cs-EXP1) mRNA, complete cds.  
DEFINITION Cucumis sativus expansin (Cs-EXP1) mRNA, complete cds.  
ACCESSION U30382 U30382.1 GI:1040875  
VERSION .  
KEYWORDS

Db	463	TTGCCCTCTACTTGTGCTCCCTAACACATGGTATGGCAGACCG	522	QY
QY	301	CAACACTCCATGCTGAGCCAGCCACTTATGGCTAACTGCCTATACCGAGCTGTC	360	Db
Db	523	CAACACTCCATGCTGAGCCAGCCACTTATGGCTAACTGCCTATACCGAGCTGTC	582	QY
QY	361	GTCGGCGTCUCCCTTGTAAGGGTACAGTATGAGAAGGGTGGAGTGGTTACATC	420	Db
Db	583	GTCGGCGTCUCCCTTGTAAGGGTACAGTATGAGAAGGGTGGAGTGGTTACATC	542	QY
QY	421	AATGCCACTCATCTCAACTCTGCTTGTGATCACAAACGTCGGTGGGAGGACCT	480	Db
Db	643	AATGCCACTCATCTCAACTCTGCTTGTGATCACAAACGTCGGTGGGAGGACCT	702	QY
QY	481	CACTCTGTGTGATAAGGGGCTGCAACTGGATGGCATTCCATGCTAGAAATGGGC	540	Db
Db	703	CACTCTGTGTGATAAGGGGCTGCAACTGGATGGCATTCCATGCTAGAAATGGGC	762	QY
QY	541	CAAACACTGGAAAGCAACACTACTCTCAATGGCAAGGGCTTCCCTCAAGCACTCT	600	Db
Db	763	CAAACACTGGAAAGCAACACTACTCTCAATGGCAAGGGCTTCCCTCAAGCACTCT	822	QY
QY	601	AGTATGGTGGCACTCTCACTGCCTATAATCTGTTCTCCATTGGCAATTGGCAA	660	Db
Db	823	AGTATGGTGGCACTCTCACTGCCTATAATCTGTTCTCCATTGGCAATTGGCAA	882	QY
QY	661	ACCTATGAGGCCCTCAATC	681	Db
Db	883	ACCTATGAGGCCCTCAATC	903	QY
RESULT	5			
AX306492				
LOCUS	AX306492	681 bp	DNA	linear
DEFINITION	Sequence 3 from Patent WO0188163.			PAT 11-DEC-2001
ACCESSION	AX306492			
VERSION	AX306492.1			GI:1764512
KEYWORDS	.			
SOURCE	cucumber.			
ORGANISM	Cucumis sativus			
REFERENCE	Spermatophyta; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Cucurbitales; Cucurbitaceae; Cucumis. 1 (sites)			
AUTHORS	Berendes, F., Rast, H.G., Vogt, U. and Goulioudis, C.			
JOURNAL	Method for producing recombinant expansins			
FEATURES	Patent: WO 0188163-A 3 22-NOV-2001; Bayer Aktiengesellschaft (DE)			
source	Location/Qualifiers			
CDS				
1.	681			
	/organism="cucumis sativus"			
<1..>	678			
	/note="unnamed protein product"			
	/codon_start=1			
	/protein_id="CAD19044.1"			
	/ab_xref="GI:17645713"			
	/translatio="DYGWQSGHATYGGDASGTGTMGAGCGYGNLYSGYGTNTVALS			
	TALFNGLSGACFEMTCINDPRWCLEGITRVTATNFCPPNFALPNNGWNCNPFLQH			
	FOMAEPAFLQAYRAGIVPVSFRYPCMKKGVRITINGISYENLUTVNGGADY			
	HSVSIKGSRTGWMSMRNWNQWNLNQGLSLQVTLSDGRITIAYNIVPSWQF			
	GOTYEGQ"			
BASE COUNT	161	a	164	g
ORIGIN	178	c	178	t
RESULT	6			
PAU93167				
LOCUS	PAU93167	1109 bp	mRNA	linear
DEFINITION	Prunus armeniaca expansin (PA-Expl) mRNA, complete cds.			PLN 01-SEP-1998
ACCESSION	U93167			
VERSION	U93167.1			GI:3510537
KEYWORDS	.			
SOURCE	apricot.			
ORGANISM	Prunus armeniaca			
REFERENCE	Spermatophyta; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Rosales; Rosaceae; Amygdaloideae; Prunus.			
AUTHORS	1 (bases 1 to 1109)			
TITLE	Mbague-A-Mbague,D., Gomez,R.-M. and Fils-Lyaon,B.			
JOURNAL	Molecular cloning and nucleotide sequence of expansin 1 (PA-Expl) from apricot fruit			
REMARK	Unpublished			
REFERENCE	2 (bases 1 to 1109)			
AUTHORS	Mbague-A-Mbague,D., Gomez,R.-M. and Fils-Lyaon,B.			
TITLE	Submitted (12-MAR-1997) Station de Technologie des Produits Vegetaux, INRA, Site AgroParis, Avignon 84914 Cedex 9, France			
JOURNAL	3 (bases 1 to 1109)			
REMARK	Submitted (12-MAR-1997) Station de Technologie des Produits Vegetaux, INRA, Site AgroParis, Avignon 84914 Cedex 9, France			
REMARK	Sequence update by submitter			

FEATURES source	Location/Qualifiers
1. 1109 /organism="Prunus armeniaca" /strain="Bergeron" /db_xref="taxon:30596" /clone="PAPR45" /tissue_type="mesocarp plus exocarp" /dev_stage="ripe fruit" 1. 1109 /gene="PA-Expl" 74. 838 /gene="PA-Expl" /codon_start=1 /product="expansin" /protein_id="AAC3329.1" /db_xref="GI:3610538" /translation="MAPQAISSLAPLALSVLNFNLHLGAFADYGWEGAHATPYGD ASCTMGACGGVNLISOGYNTIALSTALFNLNGSCSYCERNNDPRWCPCSI VATNFCPPNFIQSNDGNCNPQHDFLAEPFLQIAQYRAGIVPVRPVCMI GGIRFTINGHDFENLVLTNGGADGVHSVISIKSSRTGQPMSPRNWGONWQNSNYLNG QSLSFVTTSDPRTVSYVAPNNQFGQTFSSQF"	BASE COUNT ORIGIN
301 a 254 c 242 g 312 t	301 a 254 c 242 g 312 t
Query Match 64.4%; Score 438.4; DB 8; Length 1109; Best Local Similarity 77.8%; Pred. No. 6.2e-124; Mismatches 151; Indels 0; Gaps 0;	Query Match 64.4%; Score 438.4; DB 8; Length 1109; Best Local Similarity 77.8%; Pred. No. 6.2e-124; Mismatches 151; Indels 0; Gaps 0;
Matches 529; Conservative 0; Mismatches 151; Indels 0; Gaps 0;	Matches 529; Conservative 0; Mismatches 151; Indels 0; Gaps 0;
Qy 1 GACTACGGCGGCCTGGCAGAGCGGCCACCCACCTTATGGCGmactggcgactggcatctggc 60 Db 155 GATTTRGGCGCTGGGAGAGCGCTCATGCCACTTTATGGCGmactggcgactggcatctggc 60 Qy 61 ACATACGGGTGAGCmactgggtatgggattatacccaagggratggcaccacac 120 Db 215 ACCATGGGGAGCACTGGGTATGGGACTmactggcatccacgggtatggacaccact 274 Qy 121 GTGGCGCTGAGCmactggctattaaacatggtaatggtggtgcgttcgttgcgtttcgaaatg 180 Db 275 GCAGCTTTAAGCACAGCCTGTGTTAACATGGCTGAGCTGCTGCTGTATGAAATG 334 Qy 181 ACTTGCAACAGACGCTTAATGGCGCTTCGGGAACTTATGGGACTCTGGCAACACAC 240 Db 335 AGATGCAACAAATGACCTAGTGGTGTCTGGAGAACATGGCATCTTGTACTGGCACAC 394 Qy 241 TTGCGCTTACCTTACCTTCTCCATAACACATGGTGTGACCGTCCCTCTC 300 Db 395 TTGCGCACCTTACCTTGTGCACTCCACGACATGGGGCTGTGCAATCCTCCCTC 454 Db 815 ACTTCTCTCAGGGGTCATT 834	BASE COUNT ORIGIN
Query Match 63.7%; Score 433.6; DB 8; Length 1035; Best Local Similarity 77.4%; Pred. No. 1.9e-122; Mismatches 154; Indels 0; Gaps 0;	Query Match 63.7%; Score 433.6; DB 8; Length 1035; Best Local Similarity 77.4%; Pred. No. 1.9e-122; Mismatches 154; Indels 0; Gaps 0;
Matches 526; Conservative 0; Mismatches 154; Indels 0; Gaps 0;	Matches 526; Conservative 0; Mismatches 154; Indels 0; Gaps 0;
Qy 1 GACTACGGGTGCTGGAGACGGCCACGCCACCTTATGGGTGTTGACGATCTGC 60 Db 515 GTCCTGTACTTCTGGAGAGCTGCTGTGATGAAGAAGGGAGATCAGATTCACATC 574 Qy 361 GTCGCCGCTCTCTTCTGGTAGGTACATGATGANGAAGGTGAGTGTACAACT 420 Db 421 ATGGCCACTCTACTTCACCTGCTGTTGATGACAAACCTGGCTGGCCAGGGACGTC 480 Db 575 ATGGCCACTCTACTTCACCTGGTTGATGACCACTGGTGTGAGACGTC 634 Qy 481 CACTCTGTCTAAAGGGGTGACTGCAACTCATCTGCTGACATGGGAC 540 Db 635 CACTCAGTCTCATCAAGGGTCTGACAGACAGGGCTGACCCATGCTGAGGG 694 Qy 541 CAAACTGGCAAGCAACACTCATCTGCTGACGGCTTCCCTCAAGTACTCT 600 Db 695 CAAACTGGCAAGCAACATCTGCTGACGGCTTCCCTCAAGTACTCT 754 Qy 601 ATGTATGGTCTGCACTCTACTCTGCTGCTCTCCAACTGGCAATTGGCAA 660 Db 755 ATGGCAAGGAGCTTACAGCTACAGCTACAGTGGCTGGTAATGGCAGTTGGTAG 814 Qy 661 ACCTATGAGGCCCCTCAATT 680	BASE COUNT ORIGIN
Db 815 ACTTCTCTCAGGGGTCATT 834	Db 815 ACTTCTCTCAGGGGTCATT 834
RESULT 7	RESULT 7
CAR291817	CAR291817
LOCUS	LOCUS
DEFINITION	DEFINITION
ACCESSION	ACCESSION
VERSION	VERSION
KEYWORDS	KEYWORDS
chickpea	chickpea
Cicer arietinum	Cicer arietinum
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicots; core eudicots;	Spermatophyta; Magnoliophyta; eudicots; core eudicots;
Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Cicereae;	Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Cicereae;
Cicer	Cicer
REFERENCE	REFERENCE
AUTHORS	AUTHORS
TITLE	TITLE
JOURNAL	JOURNAL
REFERENCE	REFERENCE
AUTHORS	AUTHORS
TITLE	TITLE
JOURNAL	JOURNAL
Submitted (15-DEC-2000) Labrador E., Dept. Fisiologia Vegetal, Univ. Salamanca, Campus Miguel de Unamuno. Pza. Doctores de la Reina s/n, E-37007, SPAIN	Submitted (15-DEC-2000) Labrador E., Dept. Fisiologia Vegetal, Univ. Salamanca, Campus Miguel de Unamuno. Pza. Doctores de la Reina s/n, E-37007, SPAIN
FEATURES source	FEATURES source
1. .1035	1. .1035
/organism="Cicer arietinum"	/organism="Cicer arietinum"
/cultivar="Castellana"	/cultivar="Castellana"
/db_xref="taxon:3827"	/db_xref="taxon:3827"
/clone="CanExp_2"	/clone="CanExp_2"
/tissue_type="etiolated epicotyls"	/tissue_type="etiolated epicotyls"
/clone_lib="CAN_5"	/clone_lib="CAN_5"
/dev_stage="5 days old seedling"	/dev_stage="5 days old seedling"
/country="Spain"	/country="Spain"
/codon_start=1	/codon_start=1
/product="expansin"	/product="expansin"
/protein_id="CACI9184.1"	/protein_id="CACI9184.1"
/db_xref="GI:11932092"	/db_xref="GI:11932092"
/translation="MAPQAISSLAPLALSVLNFNLHLGAFADYGWEGAHATPYGD ASCTMGACGGVNLISOGYNTIALSTALFNLNGSCSYCERNNDPRWCPCSI VATNFCPPNFIQSNDGNCNPQHDFLAEPFLQIAQYRAGIVPVRPVCMI GGIRFTINGHDFENLVLTNGGADGVHSVISIKSSRTGQPMSPRNWGONWQNSNYLNG QSLSFVTTSDPRTVSYVAPNNQFGQTFSSQF"	/translation="MAPQAISSLAPLALSVLNFNLHLGAFADYGWEGAHATPYGD ASCTMGACGGVNLISOGYNTIALSTALFNLNGSCSYCERNNDPRWCPCSI VATNFCPPNFIQSNDGNCNPQHDFLAEPFLQIAQYRAGIVPVRPVCMI GGIRFTINGHDFENLVLTNGGADGVHSVISIKSSRTGQPMSPRNWGONWQNSNYLNG QSLSFVTTSDPRTVSYVAPNNQFGQTFSSQF"
30. .812	30. .812
CDS	CDS
Db 129 GATATGGTGTGGAGGGTCTCATGCCACTTCTATGGTGTGGCTGATGCTTCCTGC 188	Db 129 GATATGGTGTGGAGGGTCTCATGCCACTTCTATGGTGTGGCTGATGCTTCCTGC 188
Qy 61 ACCATGGTGTGGAGGGTCTCATGCCACTTCTATGGTGTGGCTGATGCTTCCTGC 120	Qy 61 ACCATGGTGTGGAGGGTCTCATGCCACTTCTATGGTGTGGCTGATGCTTCCTGC 120
Db 189 ACTATGGTGTGGAGGGTCTCATGCCACTTCTATGGTGTGGCTGATGCTTCCTGC 248	Db 189 ACTATGGTGTGGAGGGTCTCATGCCACTTCTATGGTGTGGCTGATGCTTCCTGC 248
Qy 121 GTGGCGCTGAGGACTGCGCTTATACAATGGTGTGGCTGATGCTTCCTGC 180	Qy 121 GTGGCGCTGAGGACTGCGCTTATACAATGGTGTGGCTGATGCTTCCTGC 180
Db 249 GCAGCACTAAGCTCTTATCAACATGGTGTGGCTGATGCTTCCTGC 308	Db 249 GCAGCACTAAGCTCTTATCAACATGGTGTGGCTGATGCTTCCTGC 308
Qy 241 TTGCGCTTACCTTACTCTGCTCTCCAACTGGTGTGGCTGATGCTTCCTGC 300	Qy 241 TTGCGCTTACCTTACTCTGCTCTCCAACTGGTGTGGCTGATGCTTCCTGC 300
Db 369 TTGCGCACCAATCTGCTTATGGTGTGGCTGATGCTTCCTGC 428	Db 369 TTGCGCACCAATCTGCTTATGGTGTGGCTGATGCTTCCTGC 428

QY 301 CACACTTCGCAATGGCTAGCCCTGCCTTCAATCGCTAACATTGGAGCTGGTATC 360  
 Db 429 CAACATTGTGATAGGCTGAACCTGCCTTCCTCAATTCGCTAACATTGGCTGAAATT 488  
 QY 361 GTCCCCGTCTCTTCTGTTAGGAGTACATGTAAGAARAAGTGGACTGAGCTTACAATC 420  
 Db 489 GTGCCGTCTCTTCTGTTAGGAGTACATGTAAGAARAAGTGGACTGAGCTTACAATC 548  
 QY ~ 421 ATGGCCACTCTACTCAACTCTGTTGACACAACCGGGTGGCGAGGCCACGTC 480  
 Db 549 ATGGACACTCTACTCAACTCTGTTGACACAACCGGGTGGCGAGGCCACGTC 608  
 QY 481 CACTCTGTCATAAAGGGCTCTGCACTGGCATCCATGCTAGAAATTGGGC 540  
 Db 609 CATTCACTTCCATAAAAGGTCAAGACTGGTGCACATGTCAGAAATTGGGC 668  
 QY 541 CAAACTGCAAGCAACATCTCACTTCGCAAGGCCAGGCTTCTCTGAGCTCT 500  
 Db 669 CAAATGGCAAGCAACATCTCACTTCGCAAGGCCAGGCTTCTCTGAGCTCT 728  
 QY 601 AGTGATGGTGGACTCTCACGCTTAAATCTCGTTCTCAATTGGCAATTGGCAA 660  
 Db 729 ACTGATGGTAACTATGAGCTTACAATGTTGGCCCAATCCAAATTGGCAATTGGCAA 788  
 QY 661 ACCTATGAAAGCCCTCAATT 680  
 Db 789 ACATTCAAGGAGCTCAATT 808

RESULT 8

LOCUS AF049354 1177 bp mRNA linear PLN 16-DEC-1998  
 DEFINITION Nicotiana tabacum alpha-expansin precursor (NT-EXP5) mRNA, partial  
 cds

ACCESSION AF049354  
 VERSION AF049354.1 GI:4027898  
 KEYWORDS common tobacco.  
 SOURCE  
 ORGANISM Nicotiana tabacum

REFERENCE  
 AUTHORS Link, B.M. and Cosgrove, D.J.  
 TITLE Acid-growth response and alpha-expansins in suspension cultures of  
 bright yellow 2 tobacco  
 JOURNAL Plant Physiol. 118 (3), 907-916 (1998)  
 MEDLINE 99026592  
 REFERENCE  
 AUTHORS Link, B.M. and Cosgrove, D.J.  
 TITLE Direct Submission  
 JOURNAL Submitted (20-FEB-1998) Biology, Pennsylvania State University, 208  
 FEATURES source  
 Mueller Laboratory, University Park, PA 16802, USA  
 location/Qualifiers 1. .117  
 /organism="Nicotiana tabacum"  
 /cultivar="BY2"  
 /db\_xref="taxon:4097"  
 /note="suspension culture"  
 <1. .66  
 /gene="NT-EXP5"  
 /note="predicted signal peptide"  
 <1. .750  
 /gene="NT-EXP5"  
 /function="involved in acid-growth response"  
 /note="cell wall protein"  
 /product="alpha-expansin precursor"  
 /protein\_id="AAC9081.1"  
 /db\_xref="GI:4027899"  
 /translation="ATISIISLIFEFSCFHIAFADYGGWONAHATFYGGDASGM  
 GGAGGYGNLYSGVGTNFAALSTALENGLGCGACELTCINDDGSCLOGSITATN

QY 361 CAAACTGCAAGCAACATCTCACTTCGCTTAAATGGCTAACATTGGAGCTGGC 300  
 Db 421 AATGGCCTCTACTCTGCTTAACTGGCTAACACAACTGGATGGCTAACCTCTC 300  
 QY 307 TCTCCTCCCAATCCATCCCTCCCTACACAACTGGCTAACATGGCTAACCTCTC 366  
 QY 301 CACACTTCGACATGGCAGCTGCTTCTCTCAATCGCTAACATTGGCTAACAC 360  
 Db 367 CAAACTGCAAGCAACATCTCACTTCGCTTAAATGGCTAACATTGGCTAACAC 360  
 Db 247 ACTGCAACAGCTGCACTGGCTAACATGGCTTACAGCTGCAATGGCTAACAC 360  
 QY 361 GTGCCGCGTCTCTTCTGTTAGGCTTACATGTAAGAARAAGGGGGTGGCTAACAC 420  
 Db 427 GTTCTGTTCTCTTCTGCGAGGCTGGCTGGAGAAGGGGGTGGCTAACAC 420  
 QY 421 AATGGCCTCTACTCTGCTTAACTGGCTAACACAACTGGATGGCTAACCTCTC 480  
 Db 487 AATGGACACTCTCACTTCACHTGGTTTGTGCAAACTGGCTGGCTAACAC 546  
 QY 481 CACTCTGTCATAAAGGGCTCTCAACTCTGATGGCAATCCTGCTAACAC 540  
 Db 547 CAATCAGTTCAATTAAGGGCTTAATCTGAGTGGCAACATGGCTAACAC 540  
 QY 541 CAAACTGCAAGCAACATCTCACTTCGCTTAAATGGCTAACATTGGAGCTGGC 606  
 Db 607 CAAACTGCAAGCAACATCTCACTTCGCTTAAATGGCTAACATTGGAGCTGGC 666  
 QY 601 AGTGATGGTGGACTCTCACGCTTAAATCTCGTTCTCAATTGGCAA 660  
 Db 667 AGTGATGGTGGACTCTCACGCTTAAATGGCTAACATTGGCAA 726  
 QY 661 ACCTATGAAAGCCCTCAATT 680  
 Db 727 ACCTTGAAGGGCTCAATT 746

RESULT 9

LOCUS AF297521 1048 bp mRNA linear PLN 17-SEP-2000  
 DEFINITION Prunus avium expansin 1 (Exp1) mRNA, complete cds.  
 ACCESION AF297521  
 VERSION AF297521.1 GI:10180016  
 KEYWORDS  
 SOURCE  
 ORGANISM prunus avium

FCCPNPSLIPNNNGGMNPQLQHFDLAQPAFLQAKYRAGIVPVSERRPCRRKGYVF  
 TTNGHSEPFNULVNTGGAGDVOSVSIKSNTQHOTMSRNWGNWNWANLNQSLSP  
 OVTSPGRLTTSNNAAPANWQFGQIEGAFQF"  
 <1. .1177  
 gene  
 mat\_peptide  
 /gene="NT-EXP5"  
 /product="alpha-expansin"  
 67. .747  
 /gene="NT-EXP5"  
 /product="alpha-expansin"  
 BASE COUNT 328 a /product="alpha-expansin"  
 ORIGIN 221 c 256 g 372 t

Query Match 63.7%; Score 433.6; DB 8; Length 117;  
 Best Local Similarity 77.4%; Pred. No. 1.9e-122; Matches 526; Conservative 0; Mismatches 154; Indels 0; Gaps 0; Gaps 0;

Db 67 GATTATGGGGCTGGCAAAATGCTCATGCCACTTCTATGCTGTTGGTGGATGCGCTCIGGC 126  
 QY 61 ACCATGGTGGCTGCGACAGGGCACGCCACCTTATGGAAATTACAGCCAAAGGGTATGGCAGAACACG 120  
 Db 127 ATATGGGGGCTGCTGTTGGATATGGAAATTATATAGCCAAAGGGTATGGACACACT 186  
 QY 121 GTGCCGCTGAGCATGCTGCTGAGCAATTGGCTAACATGGCTTACATGGCTGGGGTGTGAGCTG 246  
 Db 187 GCAGCACTAAGTAGCAGCAATTGGCTAACATGGCTTACATGGCTGGGGTGTGAGCTG 246  
 QY 181 ACTTGATCACACGACCTAAATGGCTTCCGGAACTATGGCTAACAC 240  
 Db 247 ACTTGCAACAGCTGCACTGGCTAACATGGCTTACAGCTGCAACTAAC 306  
 QY 241 TTTCGCCCCTCTAACTTGTCTCCCTAACACAACTGGATGGCTAACCTCTC 300  
 Db 307 TCTCCTCCCAATCCATCCCTCCCTACACAACTGGCTAACATGGCTAACCTCTC 366  
 QY 301 CAAACTTCGACATGGCAGCTGCTTCTCTCAATCGCTAACATTGGCTAACAC 360  
 Db 367 CAAACTGCAAGCAACATCTCACTTCGCTTAAATGGCTAACATTGGCTAACAC 360  
 Db 427 GTTCTGTTCTCTTCTGCGAGGCTGGCTGGAGAAGGGGGTGGCTAACAC 420  
 QY 421 AATGGCCTCTACTCTGCTTAACTGGCTAACACAACTGGATGGCTAACCTCTC 480  
 Db 487 AATGGACACTCTCACTTCACHTGGTTTGTGCAAACTGGCTGGCTAACAC 546  
 QY 481 CACTCTGTCATAAAGGGCTCTCAACTCTGATGGCAATCCTGCTAACAC 540  
 Db 547 CAATCAGTTCAATTAAGGGCTTAATCTGAGTGGCAACATGGCTAACAC 540  
 QY 541 CAAACTGCAAGCAACATCTCACTTCGCTTAAATGGCTAACATTGGAGCTGGC 606  
 Db 607 CAAACTGCAAGCAACATCTCACTTCGCTTAAATGGCTAACATTGGAGCTGGC 666  
 QY 601 AGTGATGGTGGACTCTCACGCTTAAATCTCGTTCTCAATTGGCAA 660  
 Db 667 AGTGATGGTGGACTCTCACGCTTAAATGGCTAACATTGGCAA 726  
 QY 661 ACCTATGAAAGCCCTCAATT 680  
 Db 727 ACCTTGAAGGGCTCAATT 746

REFERENCE	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Rosales; Rosaceae; Amygdaloideae; Prunus.	Db	642 CATTCACTTTCATACTAAGGGATTCAGAACAGGGCGAACCCATGTCAGAAACTGGGG 701
AUTHORS	Wu, Z. and Wiersma, P.A.	Qy	541 CAAACTCGCAAGAACACTATCTCAATGCCAACGGCCTTCAGTCAGTCATCTT 600
TITLE	Differential Expression of Expansin Genes Isolated from Sweet Cherry ( <i>Prunus avium</i> L.) During Fruit Ripening	Db	702 CAAACTCGAGAACACTTACCTCAATGCCAACGGCCTTCAGTCAGTCATCTC 761
JOURNAL	Unpublished	Qy	601 AGTGATGTCGACTCTCACTGCCTATACTCGTGTCTCCAATRGCAATTGGCCA 660
REFERENCE	2 (bases 1 to 1048)	Db	762 AGTGACGGAGACTGTCAACAACTACACGTTGGCCCTGTAATGGCACTTGGTCAG 821
AUTHORS	Wu, Z. and Wiersma, P.A.	Qy	661 ACCTATGAGGCCTCAAT 680
TITLE	Submitted (18-AUG-2000) Agriculture and Agri-Food Canada, Pacific Agri-Food Research Centre, 4200 Highway 97, Summerland, British Columbia V0H 1Z0, Canada	Db	822 ACTTTCTCAGGGGTCAATT 841
FEATURES	source	BASE COUNT	ORIGIN
gene	1..1048	281 a	245 c 234 g 288 t
CDS	/organism="Prunus avium" <db.xref="taxon:42229" 1..1048 </gene="Expl" 81..845 </gene="Expl" <note="PruaExpl" <codon_start=1 <product="expansin 1" <protein_id="PAG1392_1" <db.xref="GI:10180017" </translation="MAPOLSLAPLSTLVLNHLHGAFADYGGMEGAHATFYGGD ASGMGACAGYGNLYSDOGYGTNTALSTALNGLSGCYEMRCNDPRMRPGSI VATINFCPPNFFQSNDDNGGCWCPPLQFLDAPFQLQIAQRAGTVPTFRVCPMKK GSGTFTINGHSFLNLVLTINVGAGDVHSVFKGSRTGWOPMSRNQWNQNSONTLYNG OSLSFOVNTSDGRIVTUNVNPAGNWQFGQTSGQQF"	2	
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;
CDS	0;	Gaps	0;
Query Match	62.7%	Score	427.2;
Best Local Similarity	76.8%	Pred. No.	1.8e-120;
Matches	522;	Mismatches	158;
gene	0;	Indels	0;

QY	121	GTCGCCCTGACCACTGGCTATTACATGGATACTGTGTCGCTGCTCGTAATG 180	CDS	57. .818 /gene="EXP1" /product="Expansin" /protein_id="AA48845.1"
Db	276	GCACTTTAACCAAGCACCTGTTAACATGGCTGAGCTGCTCTGTTAATGAATG 335		/db_xref="GI:13898649" /translation="MARTSHIITALFSVINICLOCTYGYGGWEGGHATFVGGDA SGTMGGACGYYNLYSOGYGTNTAUSTALFENDGLSCGCEMRCDSDPKWCLPSSIV TATNFCCPPNLASNDNGWCNPLOFDLAEPAFQIAOTRAGTVPSYFSEVKKG GIRFTVNGHSIFNLVLTINVGAGDHHSVLSIKSGTGWQAMSRNWQNQWQNSVLYNQ ALSFQVNTSDGRVUTSNAVPADWMPFGQTSSGGF"
QY	181	ACTGTGACAAACAGACCCATAATGTCGCTTCCAGACACATGGTGGATCATGTCACAC 240		
Db	336	AGATGCAACAACTGACCTAGATGGTGTGCGCTTGAGGCATCATGTTACTGCTACAC 395		
QY	241	TPTTGCCCTCCTACTGTGCTCCAGACACATGGTGGATGTTGCAACCCCTCTC 300		
Db	396	TTTGCCCCACCTACTGTGCTGAGTCACAGATATGGGGCTGGTCAATCCCTCTC 455		
		BASE COUNT	327 a	253 c
			302 g	351 t
		ORIGIN		
		Query Match	61.8%	Score 420.6; DB 8; Length 1233;
		Best Local Similarity	76.4%	Pred. No 1.9e-18; Mismatches 159; Indels 0; Gaps 0;
		Matches	516; Conservative 0; Mismatches 159; Indels 0; Gaps 0;	
QY	361	GTCCCCCTCTCTTGTAGGTACATGTCATGAGAAGGGTGGAGTGGGGTTACAATC 420		
Db	516	GTGGCTGTACTGTGAGGTGGCTGCTGCAATACGGCCTGGGAT 575		
QY	421	AATGGCCACTATCTCACTCGTGTGATGAGAAGGGTGGAGTGGGGTTACAATC 480		
Db	576	AATGGCCACTCTACTCTCAACTGTGTTGATGAGAAGGGTGGGGTTACAATC 635		
QY	481	CACTCTGTGCTAAAGGGTCTCGACTGGTGTGCAATCCATGCTAGAATGGGGC 540		
Db	636	CATTCAGTTGATCACTCAAGGGATCAGAGTCAGACAGGGTGGCAACCTGAGAAACGGGG 695		
QY	541	CAAACACTGCAAGCACAACAACTATCTCAATGCGCAAGGCCCTCCCTCAGTACTCT 600		
Db	696	CAAACACTGCAAGCACAACAACTTCAATGCGCAAGGCCCTCCCTCAGTACTCT 755		
QY	601	AGTGATGTTGTCGACTCTGCTACTGCTATAATGCGTCTCAATGGCAATTGGCAA 660		
Db	756	AGTGACGGAGACTGTGTCACAACTAACACGGTGGCCCTGGTATATGGCAGTTGGTCAG 815		
QY	661	ACCTATGAGGCCCTCAATT 680		
Db	816	ACTTCTCAGGGGGTCAATT 835		
		RESULT 11		
		AP550936		
LOCUS	AF350936	1233 bp mRNA linear	PLN 01-MAY-2001	
DEFINITION	Prunus cerasus expansin (EXP1) mRNA, complete cds.			
ACCESSION	AF350936			
VERSION	AF350936.1			
KEYWORDS	GI:13898648			
SOURCE				
ORGANISM	Prunus cerasus.			
Bukaryota; Viridiplanteae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Rosales; Rosaceae; Amygdaloideae; Prunus.				
REFERENCE				
AUTHORS	Yoo, S.-D., Gao, Z., Cantini, C., Loescher, W. and van Nocker, S.			
TITLE	Coordinated expression of genes encoding expansins and other cell wall-modifying enzymes is associated with pectin-related changes in the cell wall during ripening of cherry ( <i>P. cerasus</i> ) fruit			
JOURNAL	2 (bases 1 to 1233)			
REFERENCE	Yoo, S.-D. and van Nocker, S.			
AUTHORS	Submitted (19-FEB-2001) Department of Horticulture, Michigan State University, 392A Plant and Soil Science Building, East Lansing, MI 48824, USA			
JOURNAL	Direct Submission			
FEATURES	Location/Qualifiers			
source	1. .1233			
	/organism="Prunus cerasus"			
	/db_xref="txon:140311"			
	/tissue_type="ripening fruit"			
	/note="sour cherry"			
	1..1233			
	/gene="EXP1"			
RESULT 12				
AP159563	AF159563	1180 bp mRNA linear	PLN 30-DEC-1999	
LOCUS	AF159563	Fragaria x ananassa expansin (Exp2) mRNA, complete cds.		
DEFINITION				
ACCESSION	AF159563			
VERSION	AF159563.1			
	GI:6666884			

KEYWORDS		Frageria x ananassa.	
SOURCE	ORGANISM	Frageria x ananassa	
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophytina; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Rosales; Rosaceae; Rosoideae; Frageria.		1. (bases 1 to 1180) Civello, P.M., Sabehat, A., Powell, A.L.T. and Bennett, A.B. T. An expansin gene expressed in ripening strawberry fruit is auxin-independent	
JOURNAL Plant Physiol. 122 (4), 1273-1279 (1999)		REFERENCE 2. (bases 1 to 1180) Authors Civello, P.M., Sabehat, A., Powell, A.L.T. and Bennett, A.B. Title Direct Submission Journal Davis, Main Lab, Davis, CA 95616, USA FEATURES source 1. .1180 /organism="Frageria x ananassa" /cultivar="Chandler" /db_xref="taxon:3747" /dev_stage="ripened fruit" 1. .1180 /gene="Exp2" /note="ripening regulated" /codon_start=1 /product="expansin" /protein_id="AAF21101.1" /db_xref="GI:6246882" /translation="MAFTSCLATILLYSVNLICRGTYADYGAGWGGHATFGGGDA SGTMGGACGGNLYQGYGNTTAISLALNDLGSCYCERMRCNDPMLCPOSIV TATNPCCPNFIQIANDNGKWPPLQHFDLAEPAFQIAQYRAGTVPVSPRRVCKKG ALSFQVTSQDRRTVSNNVAPGNNWQFGOTPSGGDQ" ALSFQVTSQDRRTVSNNVAPGNNWQFGOTPSGGDQ"	
BASE COUNT	ORIGIN	292 a	262 c
Query Match 61.3%; Score 417.6; DB 8; Length 1180; Best Local Similarity 75.9%; Pred. No. 1.6e-17; Matches 516; Conservative 0; Mismatches 164; Indels 0; Gaps 0;		RESULT 13 AF096776 AF096776 AF096776 AF096776.1 GI:3747131 DEFINITION Lycopersicon esculentum expansin (LeEXP2) mRNA, complete cds. ACCESSION AF096776 VERSION 1 KEYWORD tomato. ORGANISM Lycopersicon esculentum Spermatophytina; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Eukaryota; euasterids I; Solanales; Solanaceae; core eudicots; Asteridae; euasterids I; Solanales; Solanum; Lycopersicon.	
Qy 2 ACTACCGTGGCAGAGGCCAACCTTTATGGGGGGTGCACTGGCA 61 Db 124 AGCGGCCGGTGGTGGTGGCATGCCACTTCTATGGGGTGTCTGGCA 183 Qy 62 CCTAGGGGGACCTGGGGATGGAAATTATAGCCAGGGTAGGGACACGG 121 Db 184 CAATGGGAGGGCATGGATGGAAACTGTAGCCAAAGGTATGGAA 243 Qy 122 TGGCGCTGAGCACTGGCTATTTAACATGGATTAGTTGGTGGCTTGCTTCGAATGA 181 Db 244 CAGCACTAAGCACAGCTGTCAACGATGGCTTGACTGGGCTTGCTACCAAATGC 303 Qy 182 CTGTGACAACGACCCATAATGGTGGCTTGGGAACTTGTAGCCAACT 241 Db 304 GATGTGACAATGACCCATAGATGGTGGCTTCGGAGACATCATGCCACCACT 363 Qy 242 TTTGGCCTCCPACTTGTCTCCATTACACAAATGGTGGCTGCAACCTCTCTCC 301 Db 364 TCTGGCCTCCACATTGTGCTGAGCAATGACAAAGGGGGATCAGATTCAATCA 423 Qy 302 AACACTCGACATGGCTGAGCTTGTCTCCATTACGTCAATGGCTGCAACCTCTCTCC 361 Db 424 AGCACTCGATTTGGCGAGCCTGGTTCTGCAATGCTCAATGGCTGCAACCTCTCC 483 Qy 362 TCCCCGTCCTTCTGAGCTTGTCTGGCTTGTCTGGCTGCAACCTCTCTCC 421 Db 484 TCCCGCTCTCATTCAGAGAGTGTGCTGTGTGAGACCATGATTCACATCA 543 Qy 422 ATGGCACTCATCTCAACTCTGTGTGTGATCAACAAACGTCGGGGCAGGCCACGCC 481	REFERENCE Authors Catala, C., Rose, J.K.C. and Bennett, A.B. Title Auxin-regulated genes encoding cell wall-modifying proteins are expressed during early tomato fruit growth JOURNAL Plant Physiol. 122 (2), 527-534 (2000) PUBMED 1067745 REFERENCE 2. (bases 1 to 1147) Authors Catala,C., Rose,J.K.C. and Bennett, A.B. Title Direct Submission Journal Davis, CA 95616, USA Location Qualifiers FEATURES source 1. .1147 /db_xref="taxon:4081" /organism="Lycopersicon esculentum" /product="Lycopersicon esculentum" /db_xref="GI:3747132" /gene="LeEXP2" 58. .801 /gene="LeEXP2" /codon_start=1 /product="expansin" /protein_id="AAE4201.1" /note="GI:3747132" /translation="MASLPLVFFLSFCFYSTFADYGGWDTAHTAYGGDASCTMGG ACGGYNULSOYGTNTAALSTALFNGLTGCAYELTCNNNAQOGLTIVTNTFC PPMSLPPNNGGMCPPLQLHEQFLAQPAFLQAKYKAGIVPFSRRVPCMRGGRPTV NEHSFFNNULVNVGGDIDOSVTSINGNTWOAMSRNWNQWSNSNLNQSQSLRSQV TTSDGRILLSNNAAPNWQFGOTPSGGDQ" BASE COUNT 312 a ORIGIN 208 c 235 g 392 t	Db 544 ACGGCACTCTACTCTCAACTCTGGTTTGATCACAAACGTTGCAAGGAGATGNGC 603 Qy 482 ACTCTGTCGATTAAGGGCTCTGCACTCGATGCCAATCAGTCAGTAAATGGGCC 541 Db 604 ACTCGGTTGATCAAGGCTCCAGGGTGTGGCAATCAGTCAGGAATGGGAC 663 Qy 542 AAACTGGCAAGCAACATCTCAATGCCAAGGCTTTCCTTCAGTCAAGTCACTCTA 601 Db 664 AGACTGGCAGCACACTTCTCAAGGACAGCAGCAGCAGTCACCA 723 Qy 602 GTGATGTCGCACTCTCACTGCTATAATCTCGTCTCTTCAGTCACAA 661 Db 724 GTGAGGGCAGACTGTGACCCAGCACACAGCTGTTGCCCCTGGTAACTGGCAGTGGTCAA 783 Qy 662 CCTATGAAAGCCCTCAATTC 681 Db 784 CGTTTCAGCGGGTCAATTC 803	
BASE COUNT	ORIGIN	312 a	208 c 235 g 392 t
Query Match 60.9%; Score 414.4; DB 8; Length 1147; Best Local Similarity 75.6%; Pred. No. 1.6e-16; Matches 514; Conservative 0; Mismatches 166; Indels 0; Gaps 0;		Qy 1 GACTACGGCTGGCAGAGGCCAACCTCTTGTGCTGAGACCATGTCAGTGGCTGCA 60 Db 118 GATTTGGGAGATGGCAACTGTCTGATGCCACTTCTATGGAGGGGGTGAACCTCTGGC 177	

		CDS
QY	61 ACCATGGGTGGAGCTGGGATATGGAATTATACAGCCAAAGGATGGCACACG 120	/codon_start=1 /product="expansin 2" /protein_id=AAF39901.1"
Db	178 ACATGGGGTCTCTGTGGATATGGAATTGTATGCCAAGGGATGGACTAAC 237	/db_xref="GI:702493" /translation="MAISFTVSLIVSSENVYGGMENHATFYGGDASGTGMSGAC GYGLIYSQIGNTAALSTALENGLSGC3'EMRCNDPWRCLFGSIIVTATNCPP NPGISNDNGWCMPLQFLIDABPAFQIAORAGTVPISQRVPCVKKGVRFTING HSFNLILITNVGGAGDVPHSVKSKWQSMSRNQNQNSYLNGQSLSFQVTT
QY	121 GTCGGCGTGAGACTGGGCTATAAGCAATGATAAGTGTGGCTGCTTCRAATG 180	SDGRITISVNAFSNWQFQGTFQGGP"
Db	238 GCAGCACTAAGTACAGCACTATCAACATGGTTTACATGGTGTGTTATGAGCTC 297	
QY	181 ACTGTACAACGACCTAATGGTGCCTCCGGACTATTAGGTCACTGCCAAC 240	
Db	298 ACTGTACAACGACCTAATGGTGCCTCCGGACTATTAGGTCACTGCCAAC 357	
		BASE COUNT
		299 a 205 c 237 g 347 t
		ORIGIN
QY	241 TTTTGCCCTCTTAACCTTGCTCTCCCTAACACAACTGGTGGCAACCCCTCTC 300	Query Match 60.1%; Score 409.6; DB 8; Length 1088;
Db	358 TTGTTGCTCCGAAACCGCTCTTACCTAACATAATGGTGTGGCTGCANTCCTCTC 417	Best Local Similarity 75.1%; Pred. No. 4.7e-115; Mismatches 0; Indels 0; Gaps 0;
QY	301 CAAACTTGACATGGCTGGCTGCGCTTCCTCAATTCGCTCAATACCGAGCTGCTAC 360	Matches 511; Conservative 0; Mismatches 169; Indels 0; Gaps 0;
Db	418 CAACATTGATTAGGCAACCTGCTCTTGCAATTGCAATGCTAAATACAAAGCCGCTAC 477	
QY	361 GTCGCCGCGTCTCTCTCTAGGTACCATGATGAGAAGGTGACTGAGSTTACATC 420	
Db	478 GTCCTGTGATCTTCTGAGGGGCCCTGTATGAGAAGGAGAATAGGTATACAGTA 537	
QY	421 ATGGCCACTCATACTCACAATGGCTTAATGCTGTCACAAACGGTGGCAGGGAGTC 480	
Db	538 ATGGACACTCATTTCTGACTTGTGTTAGCAATGTTGAGGTGCTGTGTGATATT 597	
QY	481 CACTCTGTCGATTAAGGGCTCTGACTGATGGTGGCAATCTAGTCTAGAATGGG 540	
Db	598 CANTCAGTTCAATTAAGGGCTTAATGCTGTCACAACTGGCAAGGAAATTGGGC 657	
QY	541 CAAACTGGCAAAGCACAACATCTCAATGGCCAAGGCCCTTCCCTCAAGTCACTCT 600	
Db	658 CAAATGCGAACGAACTTCTAACTTAATGGCTCAAGTCTTCAAGTCACCAACA 717	
QY	601 AGTATGGTGGCTGCTGTTGATGGCAATTGGCAAATTGGCAA 660	
Db	718 AGGTATGGAGGAGCACTTATGGCAACAAATGGTGCACCAAAATTGGCAATTGGACAA 777	
QY	661 ACTTATGAGGCCCTCAATT 680	
Db	778 ACTTTGAGGGCTCAATT 797	
RESULT 14		
DEFINITION	AF230332	
LOCUS	AF230332	1088 bp mRNA linear PLN 26-JUN-2000
VERSION	AF230332.1	GI:7025492
KEYWORDS	Zinnia elegans.	
SOURCE	Zinnia elegans.	
ORGANISM	Zinnia elegans	
SPERMATOZOA; VIRIDIPLANTAE; STREPTOPHYTA; EMBRYOPHYTA; TRACHEOPHYTA; ASTERIDAE; EUASTERIDS II; ASTERALES; ASTERACEAE; ASTEROIDEAE; HELIANTHEAE; ZINNIA.		
REFERENCE	1 (bases 1 to 1088)	
AUTHORS	Jm. K.-H., Cosgrove, D.J. and Jones, A.M.	
TITLE	Subcellular localization of expansin mRNA in xylem cells	
JOURNAL	Plant Physiol. 123(2), 463-470 (2000)	
MEDLINE	10859177	
REFERENCE	2 (bases 1 to 1088)	
AUTHORS	Jm. K.-H., Cosgrove, D.J. and Jones, A.M.	
TITLE	Submitted (02-FEB-2000) Biology, University of North Carolina, Chapel Hill, NC 27599, USA	
FEATURES	Location/Qualifiers	
source	1 . 1088 /organism="Zinnia elegans"	
	/db_xref="taxon:34245";	
RESULT 15		
DEFINITION	AB029083	1220 bp mRNA linear PLN 19-JUN-2001
LOCUS	AB029083	
ACCESSION	AB029083	
VERSION	AB029083.1	GI:11907553
KEYWORDS	expansin.	

SOURCE Prunus persica ripening fruit cdna to mRNA.  
 ORGANISM Prunus persica  
 KINGDOM Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;  
 SUPERKINGDOM Spermatophyta; Magnoliophyta; eudicots; core eudicots;  
 CLASS Rosidae; eurosids I; Rosales; Rosaceae; Amygdaloideae; Prunus.  
 REFERENCE 1 (sites)  
 AUTHORS Hayama, H.  
 TITLE Homolog to expansin in peach fruit  
 JOURNAL Published Only in Database (2000) In press  
 REFERENCE 2 (bases 1 to 1220)  
 AUTHORS Hayama, H.  
 TITLE Direct Submission  
 JOURNAL Submitted (18-JUN-1999) Hiroko Hayama, National Institute of Fruit Tree Science, Department of Pomology; 2-1 Fujimoto, Tsukuba, Ibaraki 305-8605, Japan (E-mail:hiroko@fruit.affrc.go.jp, Tel:+81-298-38-6502, Fax:+81-298-38-6437)  
 FEATURES Location/Qualifiers  
 source 1. . 1220  
 /organism="Prunus persica"  
 /db\_xref="taxon:3760"  
 /codon\_start=1  
 /dev\_stage="ripening fruit"  
 gene 52. . 810  
 /product="expansin"  
 /protein\_id="Bab19676\_1"  
 /db\_xref="GI:1190754"  
 /translation="--MAFTSIALAFLFSVNLNCIQLQTYGDYGGWEGHATFVGGDA  
 SGTMGACGCGVNLISOGYCNNTAAALSTALFDNGLSCGSYEMCDSDKWCILRGSIIV  
 TATNCCPPNLAQSNDNGMCNPQHDFLAEPAFLQIAOYRAGJLVPVSFRRYSCVKKG  
 GTRFTTNGHSYFLNLITNGGAGDVSYSIKGQAMSRNWQNMWSNQMSNLYLNGQ  
 ALSFQVTSUDGRTVSNAPMNGQFQESGGQ"  
 BASE COUNT 323 a 249 c 302 g 346 t  
 ORIGIN  
 Query Match 60.1%; Score 409.4; DB 8; Length 1220;  
 Best Local Similarity 76.4%; Pred. No. 5.5e-115; Mismatches 516; Conservative matches 516; MisMatches 0; Indels 3; Gaps 1;  
 Qy 7 GGTGGCTGGCAGAGGCCAACCTTATGGGGTGTGAGGCATCTGGACCATG 66  
 Db 136 GGAGATGGGAAGGGTGTGATGCCACATTATGGGGTGTGAGGCATCTGGACCATG 195  
 Qy 67 GTGGAGCTCTGGTGTGGAAATTATAGCCAGGGATGSGACGACACGGTGGG 126  
 Db 196 GGAGGCTCTGGTGTGGAAATTATAGCCAGGGATGSGACGACACACTGAGCT 255  
 Qy 127 CTGAGCACTSGGCTATTAACTGGATAAGTGTGGCTTCGAAATGACTTGT 186  
 Db 256 CTCAGCACAGCTCTGTCACAGGATGGCTTGAGCTGGGGCTTTATGAGATGAGATG 315  
 Qy 187 ACAACGCCCTAAATGGTGCTTCGGGAACATTAGGGTCACTGCCACAACTTTGC 246  
 Db 316 GACAGTGACCCCAAGTGTGCTCCGGGAGCATCTGCACGCCACAACTCTGC 375  
 Db 247 CCTCCCTRACTTAGTCGCTTAATGAGAATGGCTGGTCAACCTCTCAACAC 306  
 Db 376 CCTCCCTRACTTAGTCGCTTAATGAGAATGGCTGGTCAACCTCTCAACAC 435  
 Qy 307 TGGACATGGCTGGCTGCCTCCCTCAAAATGCCAAATGCCAAATGCCAAATGCC 365  
 Db 436 TTTGATTTGGCTGGCTGCCTCTTACAATTCGCTCAATACCGGAAATTGCCCC 495  
 Qy 367 GTCCTTCTGCTAGGTACCATGATGAGAAGGTGGACTGGGTTACATATATGGC 426  
 Db 496 GTCCTCTGAGGGTTCTGTGAAAMAGGAGGATAAGATCACCACACGGT 555  
 Qy 427 CACTCATACTCACCCCTGTTGATCACAAACGTCGGCGCGCAGGACGTCACCT 486  
 Db 556 CACTCTACTCACCTGTTGATCACAAACGTCGGAGGTTGACGACTCT 615

Qy 487 GTGTCATAAAGGGTCTGGACTGGATGCCAATCCATGCTCTGAAATGGCCCAAAC 546  
 Db 616 GTTCACATCAAGGGTCCAAAACAGGGCGCAGCCATGTCAGGAACTGGGCCAGAAC 675  
 Qy 547 TGGAAAGCAACACTATCTCAATGGCAGGCCCTTCCTCAAGTCACCTTAGTGT 606  
 Db 676 TGGCAGGACACTTACCTCAGTGGCAGGCCTTGCTTCAGTCACCCACCGAGAC 735  
 Qy 607 GTGCGACTCTCACTGCCTATACTCTCTCCATGGCAATTGGCCAACCTAT 666  
 Db 736 GTTAACTGTA---CCAGCAATGCTGTCAGCTAACTGGCAGTTGTCACACATT 792  
 Qy 667 GAGGCCCTCAATIC 681  
 Db 793 TCSSGCGGTCATRC 807

Search completed: October 13, 2002, 23:33:48  
 Job time : 1815 secs



From: Saidha, Tekchand  
 Sent: Wednesday, October 09, 2002 5:40 PM  
 To: STIC-Biotech/ChemLib  
 Subject: Sequence search request - 09/896301

09/896301

Please search the data base & interference files :

SEQ ID NO : 1 through 7

Thank you !

Tekchand Saidha  
 Primary Examiner  
 Art Unit 1652, CM1, Room No. 10D05  
~~Mail Box 40201~~  
 (703) 305-6595

10D01

Point of Contact  
 P. Sheppard  
 Telephone number: (703) 308-4499

Searcher: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Date Picked Up: \_\_\_\_\_  
 Date Completed: 10/16/02  
 Searcher Prep/Review: \_\_\_\_\_  
 Clerical: \_\_\_\_\_  
 Online time: \_\_\_\_\_

#### TYPE OF SEARCH:

NA Sequences: \_\_\_\_\_  
 AA Sequences: \_\_\_\_\_  
 Structures: \_\_\_\_\_  
 Bibliographic: \_\_\_\_\_  
 Litigation: \_\_\_\_\_  
 Full text: \_\_\_\_\_  
 Patent Family: \_\_\_\_\_  
 Other: \_\_\_\_\_

#### VENDOR/COST (where applic.)

STN: \_\_\_\_\_  
 DIALOG: \_\_\_\_\_  
 Questel/Orbit: \_\_\_\_\_  
 DRLink: \_\_\_\_\_  
 Lexis/Nexis: \_\_\_\_\_  
 Sequence Sys.: \_\_\_\_\_  
 WWW/Internet: \_\_\_\_\_  
 Other (specify): \_\_\_\_\_

